

**PRODUCT CATALOGUE**  
LED Light Fittings



2018/19

*Passion for  
Excellent Lighting!*

Explosion-Proof  
Light Fittings  
Dust- and Waterproof  
Light Fittings  
High Bay Light Fittings  
Outdoor Light Fittings  
Emergency  
Light Fittings

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# SCHUCH — A COMPANY WITH TRADITIONS

## CHRONICLE

### March 1, 1895

A few years after the invention of the incandescent lamp, Adolf Schuch founded the company Adolf Schuch Elektrotechnische Fabrik in Worms at the river Rhein. He started the production of waterproof porcelain lamp holders for incandescent lamps, as well as waterproof porcelain hand lamps with protective glass for local breweries, tanneries and chemical plants.

### 1906

Production of first street light fittings.

### 1910

The first explosion-protected mining light fittings were delivered to coal mines in the Ruhr region, the Saarland and South Africa.

### 1929

Explosion-protected light fittings were the basis of the whole manufacturing program. SCHUCH became a pioneer for explosion-protected light fittings.

### 1937

The company was registered as a limited partnership.

### 1945

Company's 50th Anniversary. Destruction of all company premises as a result of intense bombing of Worms.

### 1945 - 1948

Recovery of production. Launch of an improvised manufacturing program for night lamps, desk lamps, workplace and shop lamps, due to deficiency in raw materials.

### 1948

The production of explosion-protected light fittings, street light fittings and industrial and special-purpose light fittings of all types was restarted.

### 1949

Production of first light fittings for fluorescent tubes, as well as street light fittings for high pressure mercury lamps.

### 1952 - 1953

Fiberglass-reinforced polyester was used for the first time to produce housings for moisture-proof, explosion-protected and street light fittings.

Introduction of own production of so-called "PREPREG" (preimpregnated fibres), as well as construction of an in-house moulding pressroom to produce fiberglass-reinforced polyester housings.

### 1953

First approval to use explosion-protected linear light fittings for single-pin fluorescent tubes

### 1957

As a result of the expansion of production demand, the company enlarged its working and storage areas by more than 14,000 m<sup>2</sup>.

### 1964 - 1965

The production was mostly moved into a new modern plant in the Mainzer Strasse in Worms, which included GRP pressing, mechanical workshops and a fully automatic powder-coating line.

### 1969

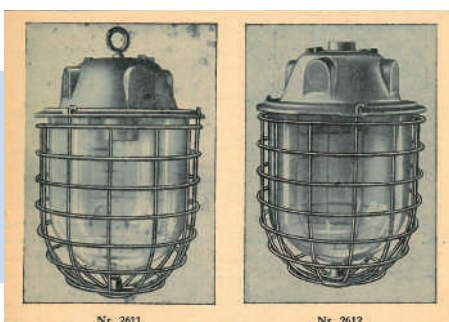
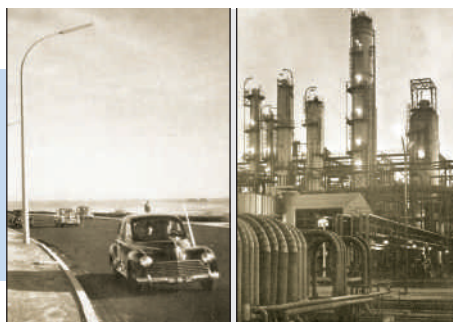
New plant expansion to the total of 40,000 m<sup>2</sup>. SCHUCH achieved a deep vertical integration and extensive technologies for design and production of highly-protected technical light fittings.

### 1970

Company's 75th Anniversary

### 1973

Start of production of the legendary 161/162 series waterproof light fittings. A major milestone in the Company's history.





#### 1975

A foamed polyurethane gasket was used in waterproof light fittings for the first time.

#### 1986

Production of first waterproof light fittings completely made of polycarbonate.

#### 1988 - 1989

World's first approval to use an explosion-protected linear light fitting for a 2-pin fluorescent tube.  
SCHUCH became a pioneer for modern explosion-protected linear light fittings.

#### 1995

Company's 100th Anniversary  
First certification as per DIN ISO 9001.

#### 1996

The company was reorganized into a limited liability company.

#### 1999

First certification of the Quality Management System for explosion-protected products as per Directive 94/9 EC.

#### After 2000

The start of extending the standard manufacturing program, as well as special industry solutions for various application conditions in the industry.

#### 2005

Production of the first light fitting with application of LED technology (emergency light fittings with batteries).

#### 2007

Establishment of a new Engineering Department that specializes on LED equipment and LED light fitting design.  
Engineering and design activity focused on LED in all product ranges.

#### 2007 - 2008

Production of first waterproof and industrial LED light fittings.

#### 2009 - 2010

Production of first LED streetlight fittings.

#### 2011 - 2012

Production of first explosion-protected LED light fittings.

#### 2014

Modernizing of the main building for energy consumption optimization.

#### 2015

Energy audit at the factory in Worms.

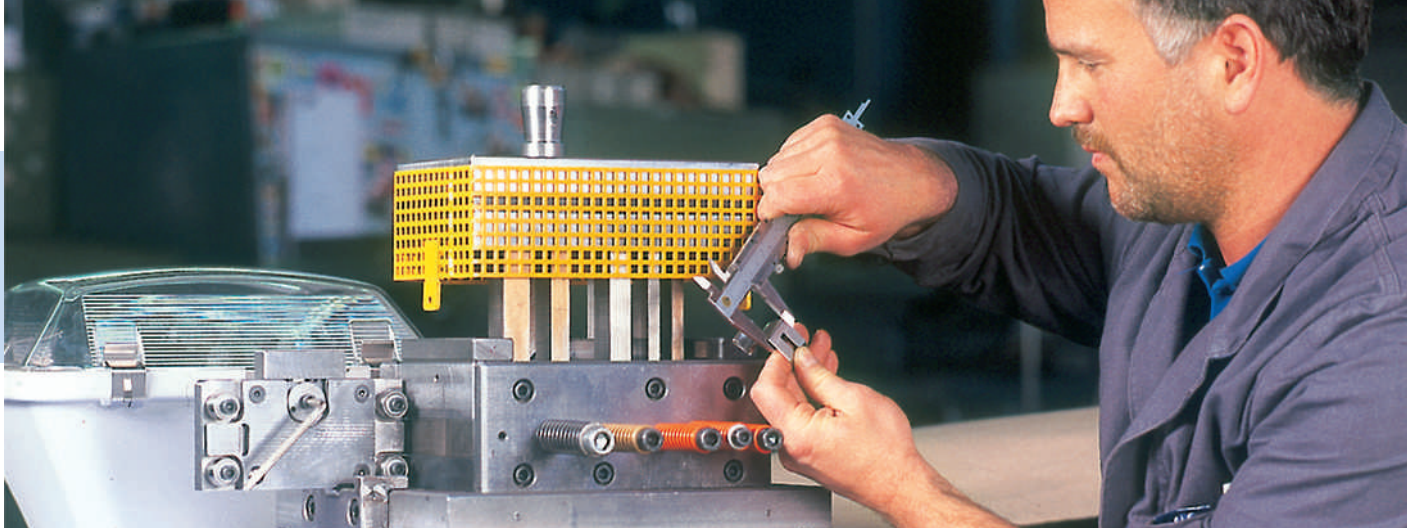
#### 2016

Installation of a new powder coating line in accordance to the current environmental safety aspects.  
Production of TRIANO XL high bay LED light fitting with luminous fluxes of up to 50,000lm.  
Launch of the Light-Management-System „LIMAS“. A unique remote control system for energy-saving and on-demand control of indoor- and street lighting.

#### 2017

Initial operation of an encapsulation plant for LED boards for explosion-proof luminaires.





# ***SCHUCH: Quality, Consistency, Future-oriented***

## **EVERYTHING IS UNDER CONTROL**

From design to final assembly: the company located in Worms performs all the light fitting design, testing and production stages.

SCHUCH engineers use advanced CAD systems to design new light fittings as well as special thermal simulation programs in order to reach optimal temperature control for each LED light fitting. This is a decisive factor for LED service life and, therefore, it is one of the most important quality parameters of a good LED light fitting. Deep vertical integration in the light fitting production is typical for SCHUCH.

Die forming and cutting, bending and welding of metal parts and housings are performed using modern machining centers and welding robots in mechanical manufacturing.

A modern environment-friendly powder coating unit is used to paint metal light fittings with varnish of a standard or customized color.

Since 1955, all light fittings made of fiberglass-reinforced polyester are produced in a separate pressroom and then provided with polyurethane/silicone gaskets in a fully automated dispensing system.

The tools required for forming, bending and pressing are produced in the in-house tooling workshop.

Careful manual assembly of light fittings is performed in several assembly departments. Finally, each light fitting undergoes specific functional test.

Continuous quality control and internal audits at all production stages ensure a high quality standard for all SCHUCH light fittings.

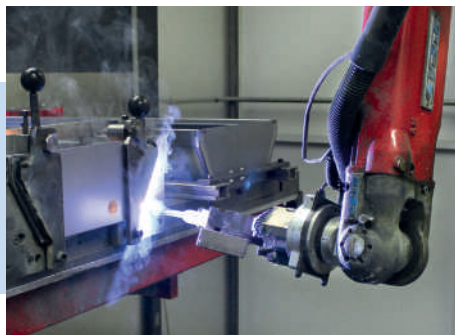
Both light fittings and their components and materials are thoroughly tested in our accredited measuring laboratories.

Along with the lighting measurements, determination of luminous flux and representation in light distribution curves, light fittings are checked for emitted interferences and noise immunity in accordance with EMC Directive 2004/108 EC and the Electromagnetic Compatibility Act.

Dust- and water chambers are used to check IP rating of the light fittings, including sealing tests underwater.

Heat measurements to check the maximum admissible ambient temperature, low temperature tests and material ageing tests performed in climatic chambers, especially for explosion-protected light fittings, finish the Test Program for SCHUCH light fittings.

This comprehensive philosophy allows SCHUCH to control all processes and to react promptly and flexibly to changing requirements.





## EXCELLENT QUALITY

SCHUCH light fittings are unique branded products "Made in Germany". The proverbial high quality standard which you can rely on.

This is proven by **Quality Certificate as per DIN ISO 9001**, which is continuously reconfirmed by VDE, reflects it. Quality management covers all company activities, starting from design, engineering, production and final assembly to sale, and is valid for all product and manufacturing fields.

Being a manufacturer of explosion-protected light fittings and components, SCHUCH, moreover, is subject to an even stronger supervision by PTB with regard to **quality control as per DIN EN/IEC 80079-34**. The routine surveillance audits have been successfully carried out and reconfirmed by a certificate since 1999.

In recognition of the high quality of delivered products, SCHUCH was awarded, in 2009 for the first time, the **Quality Certificate according to KTA 1401** as a certified supplier to all large German power plants. For illumination of power plants, SCHUCH is the absolute market leader.

The regularly carried out audits mentioned above ensure meeting the strict quality requirements that SCHUCH committed itself to since the foundation of the company.

## 100% ORIGINAL SCHUCH

Every single light fitting of our product range is an original SCHUCH product. Designed and engineered by our own engineers, produced using own tools and 100% quality approved in our own work shop. Unique and distinctive.



## COMMITTED TO ENVIRONMENT PROTECTION

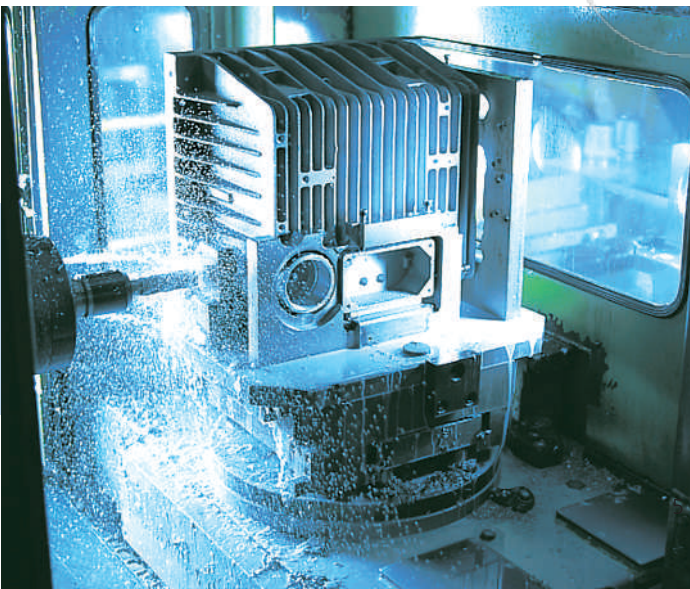
As a manufacturing company, SCHUCH is aware of its eco-political responsibility.

By energy refurbishment of the main building, by using a new powder coating plant according to current environmental safety aspects, and by conducting an energy audit at the whole plant in Worms, SCHUCH contributes a lot to the reduction of carbon dioxide consumption and the environment protection.

All SCHUCH products meet the **REACH and ROHS requirements**.

For ensuring a professional disposal of the packing material and of old equipment, SCHUCH is connected to the **INTERSEROH Recycling System**.

Being a responsible family company, SCHUCH contributes to reducing environmental pollution and saving valuable natural resources.





# Explosion-Protected Light Fittings

## *Impressive innovation strength in extreme conditions*

For more than one hundred years SCHUCH has been considered as an expert in lighting in extreme environments. Applications in explosive gases and dust environments set stringent requirements. With the results of its own intensive research and design work, as well as more than 100-year experience, SCHUCH still acts as an innovator in this challenging field. Thus, SCHUCH has decisively influenced much on the development of conventional explosion-protected linear light fittings, as well as of the relevant standards. Explosion-protected linear-light fittings with 2-pin technology are inseparably associated with SCHUCH. Using the new LED technology, SCHUCH sets new benchmarks with its innovative solutions. Worldwide, SCHUCH has one of the widest ranges of lighting products providing protection against explosive gases and dusts.

### SCHUCH AS A PIONEER

#### 1910

The first SCHUCH mining light fittings illuminate the coal mines in the Saarland and in the Ruhr region.

#### 1929

SCHUCH disposes of an extensive range of explosion-protected and mining luminaires. The product line of explosion-protected light fittings is a major sector within the entire manufacturing program.

#### 1952/53

Starting application of fiberglass-reinforced polyester housings in the sector of explosion-protected light fittings.

#### 1953

First approval of an explosion-protected ceiling light fitting for single-pin fluorescent tubes.

#### 1985

After substantial development work, SCHUCH makes an application to the Physikalisch-Technische Bundesanstalt (PTB) in Braunschweig for testing an electronic control gear (ECG) with regard to its explosion protection according to EN 50014 and EN 50017.

#### 1988

SCHUCH got the world's first certification of an explosion-protected electronic control gear for 2-pin fluorescent tubes.

#### 1988

SCHUCH produces the world's first explosion-protected lamp holder for 2-pin fluorescent tubes with "increased safety" protection method in the market.

#### 1989

World innovation: SCHUCH presents the first explosion-protected linear light fitting with an ECG for standard 2-pin fluorescent tubes. A pioneering solution that enables to generally use conventional fluorescent tubes in explosion-protected light fittings. Thus, SCHUCH became the forerunner of modern explosion-protected linear light fittings.

#### 1998

Introduction of the world's first explosion-protected linear light fitting with an ECG and an "end-of-life" cut-off system. World's first approval to use an explosion-protected ECG with an "end-of-life" cut-off system. It was immediately accepted as a mandatory standard requirement. This was another important milestone that documented SCHUCH's innovative strength.



Product	Series	Page
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## LED TECHNOLOGY

### 2002

First explosion-protected linear light fitting with an ECG for applications at ambient temperatures up to +60°C.

### 2003

Radio interference suppression up to 300 MHz.

### 2005

Compliance with the requirements of the overvoltage category III. First approval of an explosion-protected linear emergency light fitting with a microprocessor-controlled intelligent emergency control unit, an integrated ECG, an "end-of-life" cut-off system and for applications at ambient temperatures up to +55°C.

### 2010

First explosion-protected linear light fitting for Zone 2 and Zone 22 with the application of an energy-saving T5 lamp technology.

### 2011

Approval of the first protected LED floodlight, emergency light fittings and compact light fittings.

### 2014

First approval of explosion-protected linear LED light fittings, high bay LED light fittings and LED floodlights for Zone 2/22.

### 2015/16

World's first explosion-protected linear light fitting for Zone 1/21 using an innovative LED casting technique.

### 2016/17

Introduction of ExeLed 1 N and Exe Led 2 N Emergency versions as well as the Zone 2/22 floodlights nD8700 and nD8800.



# ExeLed 1

## LED-Light Fitting for Ex-Zones 1/21

### Series e865...



#### Note:

This light fitting is not suitable for applications in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.

#### Application:

Hazardous locations of zones 1 (gas) and 21 (dust).

#### Design:

**Housing:** Glass fibre reinforced polyester resin.

**Cover:** Injected polycarbonate, frosted (F) or clear, silicone gasket.

**Closure:** Stainless steel clips (KE), two of them as safety clip (KES), to be opened with screwdriver only.

**Reflector:** Aluminium, painted, carrying the encapsulated LED-modules and all electrical components, clipped into the cover, removable as a unit.

**Connection:** 3 poles up to 4 mm<sup>2</sup>.

**Cable entries:** 3 entries M25 x 1,5, (2 glands - one of them is plugged)

**Standard:** Facing downwards or forwards.

#### Mechanical installation:

Mounting accessories see spare parts/accessories.

#### Technical Data:

**LED:** Line modules appr. 6,500K, CRI typically 80,

Lifetime: L<sub>70</sub>B<sub>10</sub> > 100.000h

L<sub>80</sub>B<sub>50</sub> > 100.000h

L<sub>90</sub>B<sub>50</sub> > 50.000h

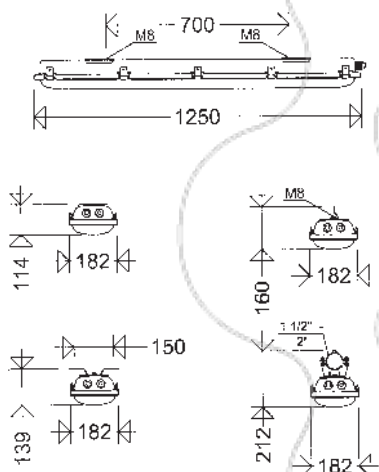
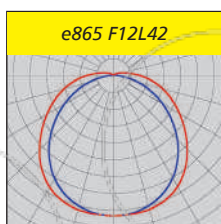
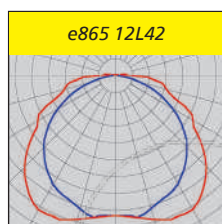
each at max. ambient temperature, (see notes)

**ECG:** 220-240V AC/DC, 0 or 50-60Hz, overvoltage, overload, short circuit, excess temperature protection

#### Options:

- for connection to group or central battery (light fittings of version ZB only)
- with monitoring module for monitoring the individual light fitting
- dimmable via DALI-interface (DIMD)

- for explosive dust atmospheres Zone 21 (**t868...**)
- for higher ambient temperatures up to +70°C depending on version



#### SCHUCH Quality - your advantage:

- LED modules with innovative encapsulation
- LED-Modules protected from mechanical or electrostatic damages by sandwich design of reflector and cover
- homogeneous illumination by using frosted diffusers (versions e865F...) no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering index CRI typically 80, according to the workplace guide lines suitable for nearly all plant locations
- external mounting system for variable mounting distances and easy installation (retaining clips HK865 P)
- lower maintenance and downtime costs due to long maintenance intervals
- ECG and reflector with LED-modules replaceable by qualified personnel on-site

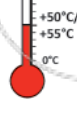
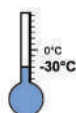
Article no.	Type	Power consumption [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Cover frosted	Cover clear	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)

e865...



II 2 G Ex eb mb op is q IIC T4 Gb

II 2 D Ex tb op is IIIC T80°C Db



#### EC-Type Examination Certificate:

IBExU 16 ATEX 1008

**Ignition protection:** eb

#### Marking:

II 2 G Ex eb mb op is q IIC T4 Gb (Zone 1)

II 2 D Ex tb op is IIIC T80°C Db (Zone 21)

**Rated voltage:** 220-240V AC/DC, 0 or 50-60Hz.

**Permissible ambient temperature:** -30°C up to see article table

The values given are for versions with through wiring.

#### optimized for energy consumption ... polycarbonate cover, frosted

86500 0001	e865F 12L42	34	4.520	133	•	55	A++	2 x 36W	6,1
86500 0002	e865F 12L60	47	5.920	126	•	55	A++	2 x 58W	6,1

#### ... polycarbonate cover, clear

86500 0011	e865 12L42	34	4.770	140	•	55	A++	2 x 36W	6,1
86500 0012	e865 12L60	47	6.290	134	•	55	A++	2 x 58W	6,1

#### with high luminous flux ... polycarbonate cover, frosted

86500 0003	e865F 12L85	65	8.810	136	•	50	A++	> 2 x 58W	6,4
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#### ... polycarbonate cover, clear

86500 0013	e865 12L85	65	9.260	142	•	50	A++	> 2 x 58W	6,4
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\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

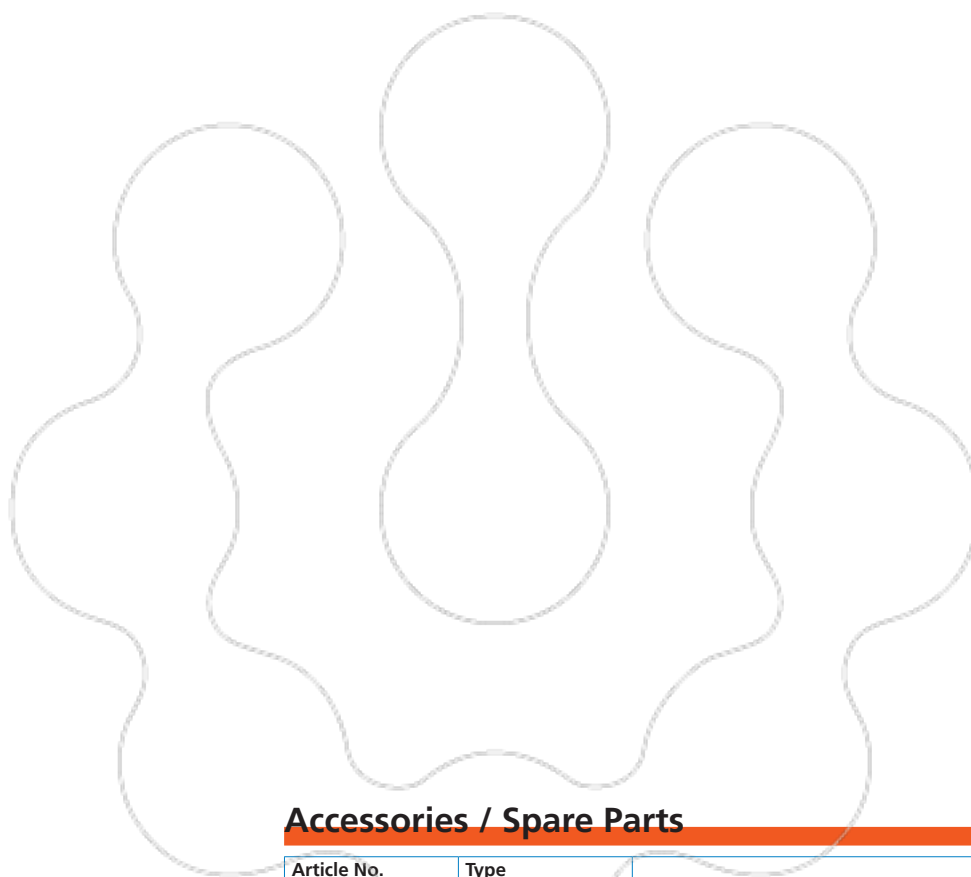
#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

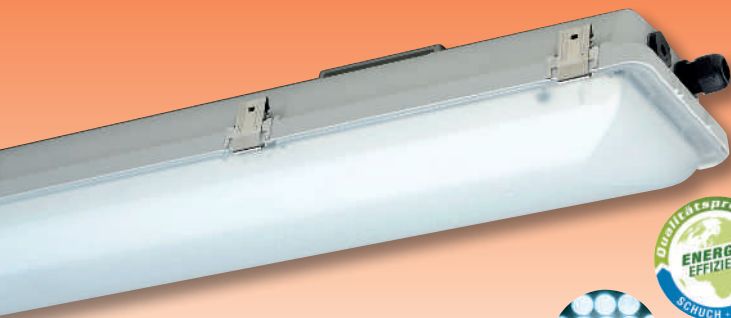


Photo: BASF



## Accessories / Spare Parts

Article No.	Type	
<b>Spare diffusers</b>		
86601 9001	<b>8654F</b>	PC, frosted
86601 9000	<b>8654</b>	PC, clear
<b>Fasteners</b>		
90055 9004	<b>KE/KES VE10</b>	stainless steel, incl. 2 safety clips (packing unit 10 pcs.)
<b>Glands/ breather</b>		
90117 9006	<b>2537 G</b>	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9006	<b>2538 G</b>	ex-protected plastic plug M25 x 1,5 with nut
90259 9000	<b>Klimastutzen EX</b>	M25 x 1,5
<b>Mounting material</b>		
86501 9003	<b>HK 865 P</b>	2 retaining clips for variable mounting distances
90001 0002	<b>H8V P</b>	2 suspensions eyes with bolts, stainless steel
90000 0002	<b>15A P</b>	2 ceiling brackets, hot galvanized steel
90032 0002	<b>15AV P</b>	2 ceiling brackets, stainless steel
90037 0004	<b>RO84 112 A P</b>	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	<b>RO84 2 A P</b>	2 pipe clamps 2", stainless steel, with support
26000 0004	<b>W26 P</b>	2 wall mounting angles
26000 0002	<b>W26/30 P</b>	2 wall mounting angles 30°
26000 0003	<b>W26/45 P</b>	2 wall mounting angles 45°



## ExeLed 1 N

### LED-Emergency Light Fitting for Ex-Zone 1/21 Series e864...

#### Application:

Hazardous locations of Zones 1 and 21, in workshops for the illumination of the escape routes etc. according to DIN VDE 0108.

#### Design:

**Housing:** Glass fibre reinforced polyester resin. Version H with separate battery box at one small side of the housing.

**Cover:** Injected polycarbonate, frosted (F) or clear.

**Closure:** Stainless steel clips (KE), two of them as safety clip (KES), to be opened with screwdriver only.

**Reflector:** Aluminium, painted, carrying the LED-modules, clipped into the cover, suspendable.

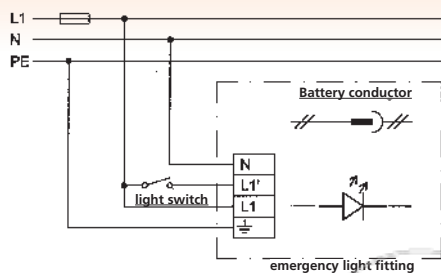
**Connection:** 4 poles up to 2,5 mm<sup>2</sup>.

**Cable entries:** 2 entries M25 x 1,5, (2 glands - one of them is plugged)

**Standard:** Facing downwards or forwards.

**Mechanical installation:**

Mounting accessories see spare parts/ accessories. Sealing gaskets for direct ceiling mounting are included.

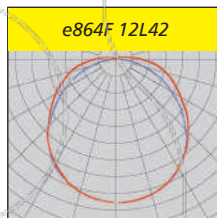
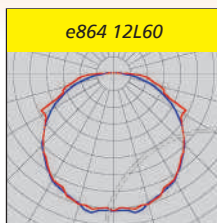


#### Starting:

Connect battery conductor.

**Out-of-operation:** separate battery conductor.

**Stand-by operation:** Do not connect L1'.



#### Technical Data:

**LED:** Line modules ca. 6,500K, typically R<sub>a</sub> 80, Lifetime L<sub>70B10</sub> > 100.000h, L<sub>80B50</sub> > 100.000h at max. ambient temperature

Incorporated NiCd battery, electronic charger, short circuit protected battery and reverse battery protection

**Electronic deep discharge protection:** acc. to EN 61347-2-7

Re-charging time: 24h, acc. to EN 60598-2-22

**Automatic monitoring:** of the emergency light fitting according to EN 62034, indication of the test results by 2-coloured LED (luminescence diode) at the luminaire

#### Mode of operation:

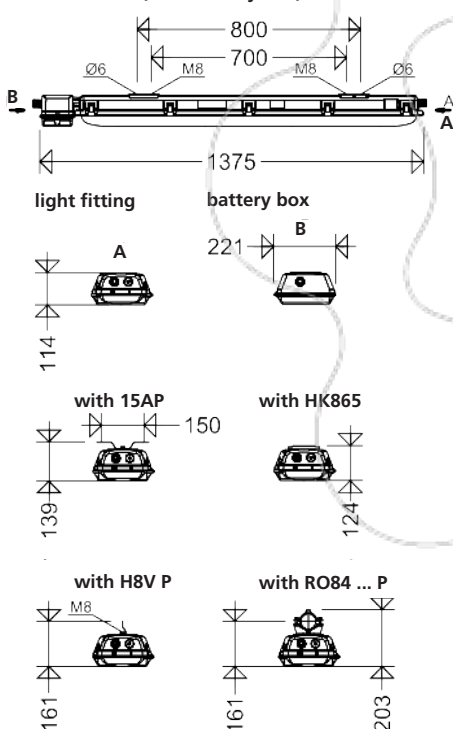
**maintained operation** = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

**stand-by operation** = switching on in case of mains failure.

#### Options:

- dimmable via DALI-interface (DIMD) – be offered for all wattages
- integrated through-wiring system can – inhibiting facility

#### e864 12L... (with battery box)



#### SCHUCH Quality - your advantage:

- reliable, fail-safe and long-lasting
- operation in maintained, switched maintained or stand-by mode possible
- multifunctional LED with coded indication of the functions, states and potential faults of the electronic device and the battery
- automatic weekly function test
- automatic annual duration test
- manual actuation of duration test is possible
- easy battery replacement due to connector
- for ambient temperatures from -30°C to +55°C, depending on version
- flexible when installed in the light band
- one sided loop-in/loop-out

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous flux [lm] * (emergency)	Luminous efficacy [lm/W] **	Cover frosted	Cover clear	1h operation time	3h operation time	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packingmaterial)
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#### Note:

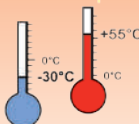
This light fitting is not suitable for applications in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.

### e864...



II 2 G Ex db eb [ib] mb op is q IIC  
T4 Gb

II 2 D Ex op is tb IIIC  
T80°C Db



EC-Type Examination Certificate:

IBExU 17 ATEX 1026

Ignition protection: ec

Marking:

II 2 G Ex db eb [ib] mb op is q IIC T4 Gb (Zone 1)

II 2 D Ex op is tb IIIC T80°C Db (Zone 21)

Rated voltage: 220-240V AC, 50-60Hz.

Permissible ambient temperature:

-30°C up to +55°C

Normal range acc. to EN 60598-2-22 0°C up to 45°C, reduced emergency light duration if operated below 0°C.

86400 0001	e864F 12L42/1/1,6	35	4.520	700	129	•	•	•	55	A++	2 x 36W	7,6
86400 0002	e864F 12L60/1/1,6	47	5.920	700	126	•	•	•	55	A++	2 x 58W	7,6
86400 0101	e864F 12L42/3/4	35	4.520	700	129	•	•	•	55	A++	2 x 36W	8,0
86400 0102	e864F 12L60/3/4	47	5.920	700	126	•	•	•	55	A++	2 x 58W	8,0
86400 0011	e864 12L42/1/1,6	35	4.770	740	136	•	•	•	55	A++	2 x 36W	7,6
86400 0012	e864 12L60/1/1,6	47	6.290	740	134	•	•	•	55	A++	2 x 58W	7,6
86400 0111	e864 12L42/3/4	35	4.770	740	136	•	•	•	55	A++	2 x 36W	8,0
86400 0112	e864 12L60/3/4	47	6.290	740	134	•	•	•	55	A++	2 x 58W	8,0

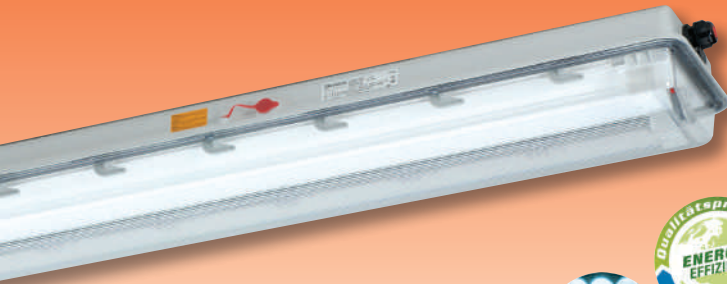
\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

## Accessories / Spare Parts

Article No.	Type	
<b>Spare batteries</b>		
90222 9021	AKKU 2627 4,0Ah	Spare battery 4.0Ah
90222 9023	AKKU 8020 1,6Ah	Spare battery 1.6Ah
<b>Spare covers</b>		
86601 9001	8654F	PC, frosted
86601 9000	8654	PC, clear
<b>Glands/breather</b>		
90117 9006	2537 G	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9006	2538 G	ex-protected plastic plug M25 x 1,5 with nut
90259 9000	Klimastutzen EX	M25 x 1,5
<b>Mounting material</b>		
86501 9003	HK 865 P	2 retaining clips for variable mounting distances
90001 0002	H8V P	2 suspensions brackets, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0004	W26 P	2 wall mounting angles
26000 0002	W26/30 P	2 wall mounting angles 30°
26000 0003	W26/45 P	2 wall mounting angles 45°

## LED-Light Fitting for Ex-Zone 1/2/1 Series e840...



### Note:

This light fitting is not suitable for applications in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.

### Application:

Hazardous locations of Zone 1 (gas) and 21 (dust).

### Design:

Housing: Glass fibre reinforced polyester resin.

Cover: Clear polycarbonate with internal prisms, hinged, silicone gasket.

Central locking system: Operated by a hexagonal socket wrench 13mm.

Reflector: Aluminium, carrying the encapsulated LED-modules with frosted covers for glare limitation, hingeable and removable.

Connection: 3 poles up to 4 mm<sup>2</sup>.

Cable entries: 3 entries M25 x 1,5, (2 glands - one of them is plugged)

Standard: Facing downwards or forwards.

Mechanical installation:

Mounting accessories see spare parts/ accessories.

### Technical Data:

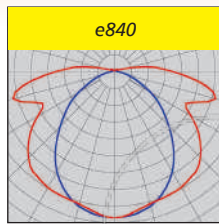
LED: Line modules appr. 6,500K, CRI typically 80,  
lifetime  $L_{70B_{10}} > 80,000h$   
 $L_{80B_{50}} = 80,000h$   
at max. ambient temperature

ECG: 220-240V AC/DC, 0 or 50-60Hz, overvoltage, overload, short circuit, excess temperature protection

### Options:

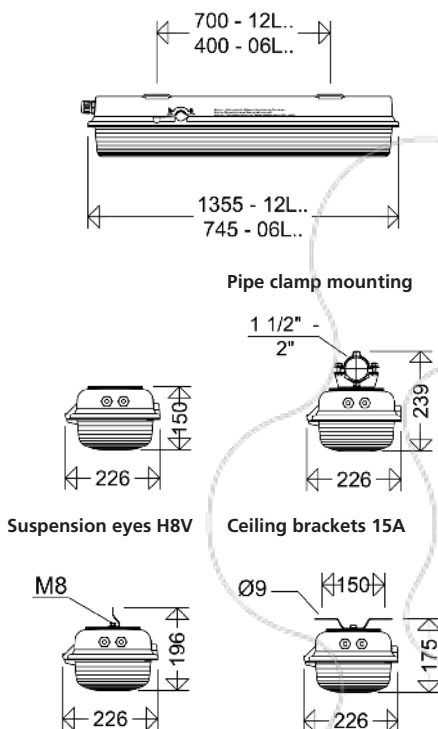
- for connection to group or central battery (light fittings of version ZB only)
- with monitoring module for monitoring the individual light fitting
- dimmable via DALI-interface (DIMD)

- with through-wiring 5 x 2,5mm<sup>2</sup>
- for higher ambient temperatures up to +65°C depending on version



### SCHUCH Quality - your advantage:

- LED modules with innovative encapsulation
- homogeneous illumination due to frosted covers on the reflector for glare limitation, no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering index CRI typically 80, according to the workplace guide lines suitable for nearly all plant locations
- Original SCHUCH central locking system
- ECG and reflector with LED-modules replaceable by qualified personnel on-site



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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e840...



### EC-Type Examination Certificate:

PTB 16 ATEX 2001

PTB 16 ATEX 2011

Ignition protection: eb

Marking:

II 2 G Ex eb mb op is q IIC T4 Gb (Zone1)

II 2 D Ex tb op is IIIC T80°C Db (Zone 21)

Rated voltage: 220-240V AC/DC, 0 or 50-60Hz.

Permissible ambient temperature: -25°C up to see article table

### optimized for energy consumption

84005 0011	e840 06L22	18	2.140	119	55	A++	2 x 18W	5,6
84005 0012	e840 06L42	33	4.240	128	55	A++	2 x 36W	5,7
84005 0001	e840 12L42	33	4.240	128	55	A++	2 x 36W	8,0
84005 0002	e840 12L60	47	5.610	119	55	A++	2 x 58W	8,0

### with high luminous flux

84005 0003	e840 12L85	65	8.350	128	50	A++	> 2 x 58W	8,5
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\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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## e840... PM



II 2 G Ex eb mb  
op is q IIC T4 Gb

II 2 D Ex tb op  
is IIIC T80°C Db

IP66



### Pole mounted light fitting with integrated mounting system

EC-Type Examination Certificate:

PTB 16 ATEX 2001

PTB 16 ATEX 2011

Ignition protection: eb

Marking:

II 2 G Ex eb mb op is q IIC T4 Gb (Zone 1)

II 2 D Ex tb op is IIIC T80°C Db (Zone 21)

Rated voltage: 220-240V AC/DC,

0 or 50-60Hz

Mechanical installation: integrated mounting system 06L: Ø 42 x 150mm (Length)

12L: Ø 42 x 245mm (Length)

Permissible ambient temperature:

-25°C up to see article table

### optimized for energy consumption

84005 0911	<b>e840 06L22 PM</b>	18	2.140	119	55	A++	2 x 18W	7,9
84005 0912	<b>e840 06L42 PM</b>	33	4.240	128	55	A++	2 x 36W	8,0
84005 0901	<b>e840 12L42 PM</b>	33	4.240	128	55	A++	2 x 36W	8,1
84005 0902	<b>e840 12L60 PM</b>	47	5.610	119	55	A++	2 x 58W	8,1

### with high luminous flux

84005 0903	<b>e840 12L85 PM</b>	65	8.350	128	50	A++	> 2 x 58W	8,7
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\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

## Accessories / Spare Parts

Article No.	Type	
<b>Spare diffuser</b>		
84001 9003	<b>8402 SIL</b>	for e840 06L..
84001 9004	<b>8404 SIL</b>	for e840 12L..
<b>Cable glands/ breather</b>		
90117 9000	<b>2537</b>	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9000	<b>2538</b>	ex-protected plastic plug M25 x 1,5 with nut
90259 9000	<b>Klimastutzen EX</b>	breather M25 x 1,5
<b>Mounting material</b>		
90001 0002	<b>H8V P</b>	2 suspensions eyes with bolts, stainless steel
90000 0002	<b>15A P</b>	2 ceiling brackets, hot galvanized steel
90032 0002	<b>15AV P</b>	2 ceiling brackets, stainless steel
90000 0011	<b>84 AA</b>	1 pair of brackets, stainless steel, for compensating the different mounting distances of types e840 / e152 or e841 / e148
90037 0004	<b>RO84 112 A P</b>	2 pipe clamps 1 ½", stainless steel, with support
90038 0004	<b>RO84 2 A P</b>	2 pipe clamps 2", stainless steel, with support
26000 0008	<b>W 26/L P</b>	2 wall mounting angles
26000 0002	<b>W 26/30 P</b>	2 wall mounting angles 30°
26000 0003	<b>W 26/45 P</b>	2 wall mounting angles 45°

NEW

## Small LED-Light Fittings for Ex-Zone 1/2/1 Series e855...



### Application:

Hazardous areas in Zones 1, 21 and 2, 22 as standard illumination, as information or escape route lighting (with pictograms).

### Design:

**Housing:** Glass fibre reinforced polyester resin.

**Diffuser:** Clear polycarbonate, frosted, detachable, silicone gasket.

**Reflector:** white, detachable, carrying the encapsulated LED-modules and glare limitation modules.

**Central locking system:** Operated by a hexagonal box spanner 13mm.

**Connection:** Prepared for looping the mains cable. Terminal L1+N+PE; up to 2,5mm<sup>2</sup>.

**Cable entries:** 2 entries M25 x 1.5 (2 cable glands, 1 with blanking plug).

**Mounting:** Side fixing brackets allow direct mounting on to walls or ceilings.

### Technical Data:

**LED:** Line modules appr. 6,500K, CRI typically 80,  
lifetime  $L_{70B_{10}} > 80,000h$   
 $L_{80B_{50}} = 80,000h$   
at max. ambient temperature (see notes)

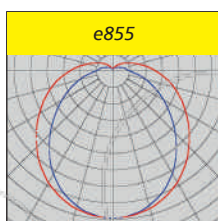
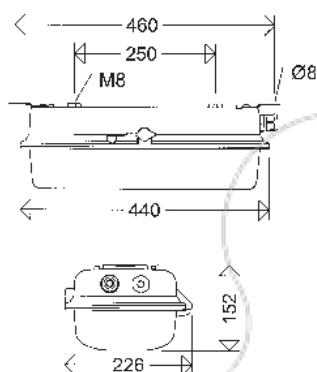
**ECG:** 220-240V AC/DC, 0 or 50-60Hz, overvoltage, overload, short circuit, excess temperature protection

### Options:

- for connection to group or central battery (light fittings of version ZB only)
- with monitoring module for monitoring the individual light fitting
- dimmable via DALI-interface (DIMD)
- metal gland
- preparation for a 5-core looping

### Note:

Special versions available for special application requirements such as in humid atmospheres, wastewater and rainwater reservoirs, water treatment plants, etc



### SCHUCH Quality - your advantage:

- LED modules with innovative encapsulation
- homogeneous illumination due to frosted covers on the reflector for glare limitation, no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering index CRI typically 80, according to the workplace guide lines suitable for nearly all plant locations
- Original SCHUCH central locking system
- ECG and reflector with LED-modules replaceable by qualified personnel on-site



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Diffuser frosted	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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e855...



II 2 G Ex eb mb  
op is q II C T4 Gb

II 2 G Ex db eb mb  
op is q II C T4 Gb

II 2 D Ex op is tb  
IIIC T80°C Db

IP66



**EC-Type Examination Certificate:**

IBExU 17 ATEX 1132

**Type of protection:** eb (increased safety)

**Marking:**

II 2 G Ex eb mb op is q II C T4 Gb (Zone 1)

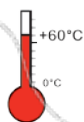
II 2 G Ex db eb mb op is q II C T4 Gb (Zone 1)

II 2 D Ex op is tb IIIC T80°C Db (Zone 21)

**Rated Voltage:** 220-240V AC, 176-275V DC, 50-60Hz

**Permissible ambient temperature:**

-30°C up to see article table



85500 0007	e855F L05	6	510	85	•	60	A++	1 x 8W	5,0
85500 0001	e855F L10	10	1.060	106	•	60	A++	2 x 8W	5,0
85500 0002	e855F L20	18	2.050	114	•	60	A++	2 x 18W	5,1
85500 0003	e855F L10 DIMD	10	1.060	106	•	60	A++	2 x 8W	5,0
85500 0004	e855F L20 DIMD	18	2.050	114	•	60	A++	2 x 18W	5,1

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

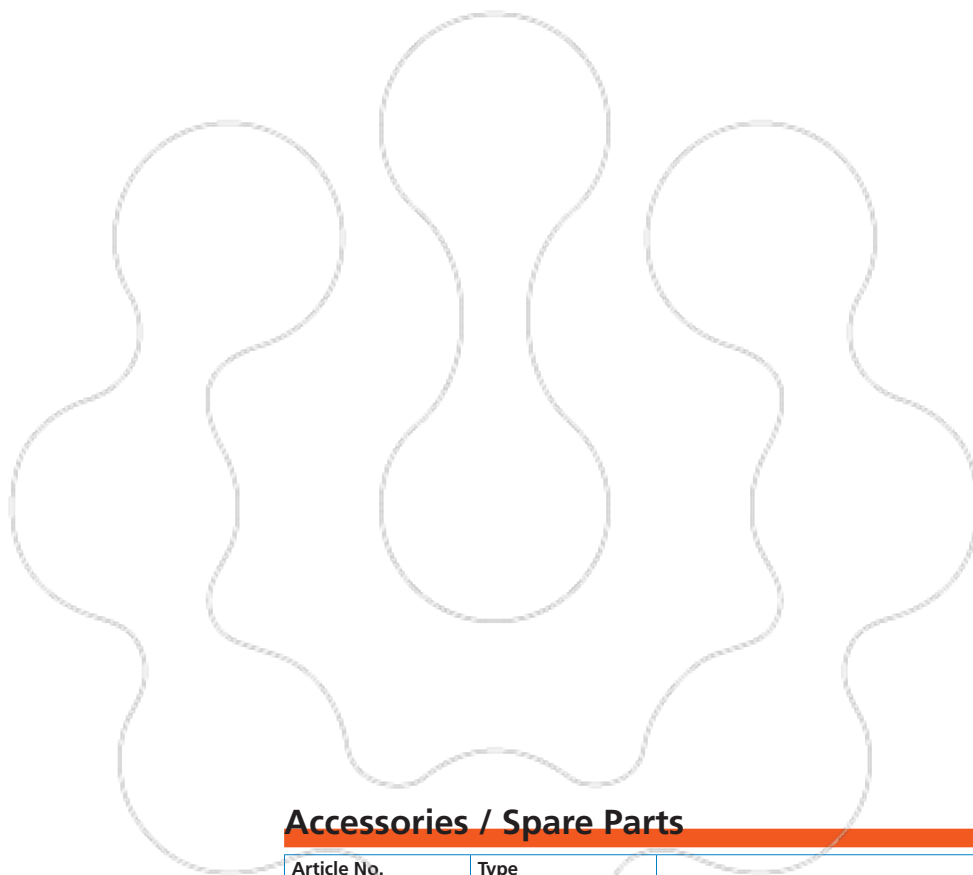
### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Foto: BASF



Self-adhesive pictograms for identification of escape routes acc. to DIN EN ISO 7010 and ASR A1.3.



121/33 W

.../34 W

.../35 W

Viewing distance = 25m

## Accessories / Spare Parts

Article No.	Type	
<b>Spare diffuser</b>		
85501 9001	855	PC frosted
<b>Cable entries / Glands / Breathers</b>		
90117 9000	2537	ex-protected plastic cable gland M25 x 1,5
90118 9000	2538	ex-protected plastic plug M25 x 1,5
90259 9000	Klimastutzen EX	M25 x 1,5 breather
<b>Mounting material</b>		
90001 0002	H8V P	2 suspension brackets, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0008	W 26/L P	2 wall mounting brackets
26000 0002	W 26/30 P	2 wall mounting brackets 30°
26000 0003	W 26/45 P	2 wall mounting brackets 45°
<b>Self-adhesive pictograms</b>		
12112 0006	121/33 W	emergency exit to the left
12112 0007	121/34 W	emergency exit to the right
12112 0008	121/35 W	emergency exit below

NEW

## Small LED-Emergency Light Fitting for Ex-Zone 1/21 Series e856 ...



### Application:

Hazardous areas in Zones 1, 2 and 21, 22 as safety illumination and as information or escape route lighting.

### Mechanical design:

**Housing:** Glass fibre reinforced polyester resin. Version H with separate battery box at one small side of the housing.

**Diffuser:** Clear polycarbonate, frosted, detachable, silicone gasket.

**Reflector:** white, detachable, carrying the encapsulated LED-modules and glare limitation modules.

**Central locking system:** Operated by a hexagonal box spanner 13mm.

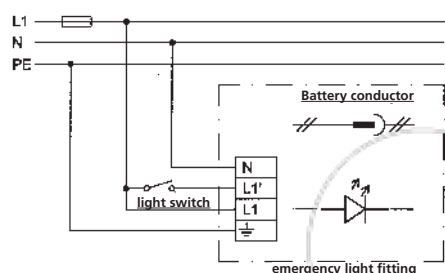
**Connection:** Prepared for looping the mains cable at one end 4 x 2.5mm<sup>2</sup>. Terminal L1 + L1' + N + PE, up to 2.5 mm<sup>2</sup>.

**Cable entries:** 2 entries M25 x 1.5 (2 cable glands, 1 with blanking plug).

**Mounting:** Side fixing brackets allow direct mounting on to walls or ceilings (Version without battery box). Mounting accessories see spare parts/ accessories.

### Note:

Special versions available for special application requirements such as in humid atmospheres, wastewater and rainwater reservoirs, water treatment plants, etc.

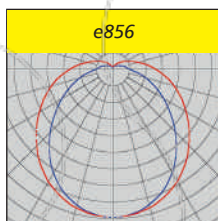


### Starting:

Connect battery conductor.

Out-of-operation: separate battery conductor.

Stand-by operation: Do not connect L1'.



### Technical Data:

**LED:** Line modules ca. 6,500K, typically R<sub>a</sub> 80, Lifetime L<sub>70</sub>B<sub>10</sub> > 80.000h, L<sub>80</sub>B<sub>50</sub> > 80.000h at max. ambient temperature

**Incorporated NiCd battery,** electronic charger, short circuit protected battery and reverse battery protection

**Electronic deep discharge protection:** acc. to EN 61347-2-7

Re-charging time: 24h, acc. to EN 60598-2-22

**Automatic monitoring:** of the emergency light fitting according to EN 62034, indication of the test results by 2-coloured LED (luminescence diode) at the luminaire

### Mode of operation:

**maintained operation** = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

**stand-by operation** = switching on in case of mains failure.

### Options:

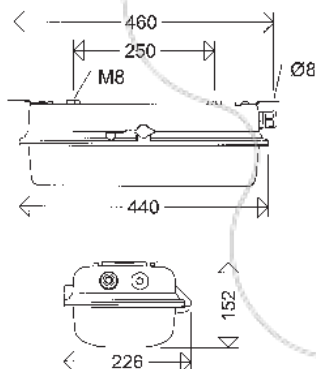
- dimmable via DALI-interface (DIMD)
- remote inhibiting facility
- preparation for a 6-core looping at one end

### SCHUCH Quality - your advantage:

- LED modules with innovative encapsulation
- homogeneous illumination due to frosted covers on the reflector for glare limitation, no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering index CRI typically 80, according to the workplace guide lines suitable for nearly all plant locations
- reliable, fail-safe and long-lasting
  - operation in maintained, switched maintained or stand-by mode possible
  - multifunctional LED with coded indication of the functions, states and potential faults of the electronic device and the battery
  - automatic weekly function test
  - automatic annual duration test
  - manual actuation of duration test is possible
  - easy battery replacement due to connector
- Original SCHUCH central locking system
- ECG and reflector with LED-modules replacable by qualified personnel on-site



### e856F ... (without battery box)



### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Foto: BASF

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous flux [lm] * (emergency)	Luminous efficacy [lm/W]	Cover frosted	1h operation time	3h operation time	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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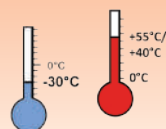
e856...



II 2 G Ex db eb [ib] mb  
op is q IIC T4 Gb

II 2 D Ex op is tb  
IIC T80°C Db

IP66



EC-Type Examination Certificate:

IBExU 17 ATEX 1132

Type of protection: eb (increased safety)

Marking:

II 2 G Ex db eb [ib]mb op is q IIC T4 Gb  
(Zone 1)

II 2 D Ex op is tb IIC T80°C Db (Zone 21)

Rated voltage: 220-240V AC, 50-60Hz.

Permissible ambient temperature:

-30°C up to +55°C

Normal range acc. to EN 60598-2-22

0°C up to 40° or 50°C (H-Versions).

Reduced emergency light duration if  
operated below 0°C.

85600 0017	e856F L05/1/1,6	6	510	510	85	•	•	55	A++	1 x 8W	5,4
85600 0018	e856F L05/3/2,5	6	510	260	85	•	•	55	A++	1 x 8W	5,4
85600 0003	e856F L10/1/1,6	11	1.060	560	96	•	•	40	A++	2 x 8W	5,4
85600 0004	e856F L10/3/2,5	11	1.060	260	96	•	•	40	A++	2 x 8W	5,4
85600 0001	e856F L20/1/1,6	19	2.050	560	108	•	•	40	A++	2 x 18W	5,5
85600 0002	e856F L20/3/2,5	19	2.050	260	108	•	•	40	A++	2 x 18W	5,6

for high temperatures up to +55°C

Design:

Same as standard version, but with separate battery box at one small side of the housing.

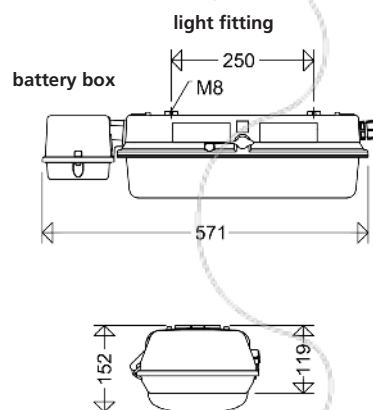
85600 0007	e856F L10/1/1,6 H	11	1.060	560	96	•	•	55	A++	2 x 8W	6,3
85600 0008	e856F L10/3/2,5 H	11	1.060	260	96	•	•	55	A++	2 x 8W	6,4
85600 0005	e856F L20/1/1,6 H	19	2.050	560	108	•	•	55	A++	2 x 18W	6,4
85600 0006	e856F L20/3/2,5 H	19	2.050	260	108	•	•	55	A++	2 x 18W	6,5

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



e856F ... H (with battery box)



Self-adhesive pictograms for identification of  
escape routes acc. to DIN EN ISO 7010 and  
ASR A1.3.



121/33 W

.../34 W

.../35 W

Viewing distance = 25m

## Accessories / Spare Parts

Article No.	Type	
<b>Spare batteries</b>		
90222 9023	AKKU 8020	Spare battery 1.6Ah
90222 9024	AKKU 8021	Spare battery 2.5Ah
<b>Spare diffuser</b>		
85501 9001	855	PC frosted
<b>Cable entries / Glands / Breathers</b>		
90117 9000	2537	ex-protected plastic cable gland M25 x 1,5
90118 9000	2538	ex-protected plastic plug M25 x 1,5
90259 9000	Klimastutzen EX	M25 x 1,5 breather
<b>Mounting material</b>		
90001 0002	H8V P	2 suspension brackets, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0008	W 26/L P	2 wall mounting brackets
26000 0002	W 26/30 P	2 wall mounting brackets 30°
26000 0003	W 26/45 P	2 wall mounting brackets 45°
<b>Self-adhesive pictograms</b>		
12112 0006	121/33 W	emergency exit to the left
12112 0007	121/34 W	emergency exit to the right
12112 0008	121/35 W	emergency exit below

## LED Floodlight for Ex-Zone 1/21

### Series d9000...

#### Applications:

Hazardous locations of zones 1 and 21, onshore and offshore installations, loading stations, oil rigs, silos etc.

#### Design:

**Housing and glass retaining frame:**

From weather-resistant cast aluminium.

Operating unit located inside the housing.

**Safety glass pane:** Resistant to temperature variations, sealed into the frame, hingeable.

**Light control:** LED optics with narrow (LOM) or narrow/wide (LOWW) beaming

characteristics.

**Connection terminal:** Standard: L1+N+PE, clamping range: 2,5mm<sup>2</sup>.

**Mounting:** Stainless steel bracket, infinitely swivelling around the longitudinal axis of the floodlight.



#### Technical Data:

**LED:** Highpower LED, typically ca. 5.000K, colour rendering index typically CRI75, shelf life  $L_{95 B_{10}} > 50.000h$  at max. ambient temperature (see notes)

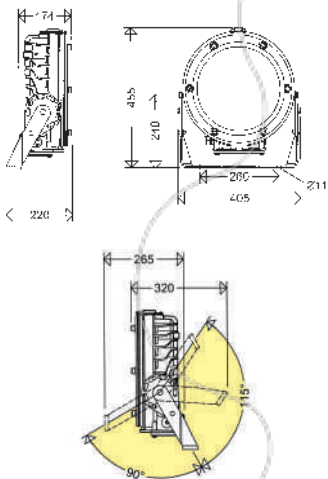
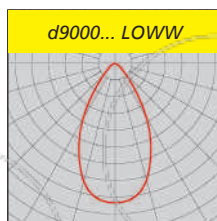
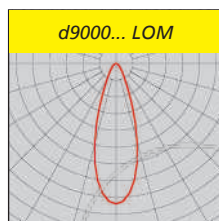
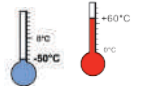
**ECG:** 220V - 240V AC, 50/60Hz. Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited. Overvoltage protection 3kV, excess temperature protection-, overload and short circuit protection.

**Ambient temperature:** -20°C up to +40°C

#### Options:

- clamping range up to 6mm<sup>2</sup>
- 2 cable glands for cable looping
- hard coating
- grid

- for ambient temperatures from -50°C up to +40°C/+50°C/+60°C (as per technical version)



Swivel range: ± 205

#### SCHUCH Quality - your advantage:

- housing and glass retaining frame made out of an excellent quality copper-free aluminium alloy (British Standard Marine Grade BS EN 13195) without additional painting or coating, also applicable in rough offshore installations
- instant light with maximum luminous flux even at very low temperatures (increased luminous flux)
- extremely low luminous flux decline during life cycle ( $L_{95 B_{10}}$ )
- optimal thermal management possible by direct connection from the LED to the housing, large cooling surface, excellent thermal conductivity
- homogeneous and effective light distribution by specially calculated lens optics
- infinitely adjustable tilt angle

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption W *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Temperature class	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [ca. kg] (without packaging material)
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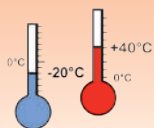
**d9000 ...**



II 2 G Ex d e op is  
IIC T4/T6 Gb

II 2 D Ex tb IIIC  
T80°C Db

IP66/67



EC-Type Examination Certificate:

PTB12 ATEX 1030

Other approvals:

IECEX PTB12.0057

Marking:

II 2 G Ex d e op is IIC T4/T6 Gb (Zone 1)

II 2 D Ex tb IIIC T80°C Db (Zone 21)

Ignition protection: d ( flameproof)

Ambient temperature:

-20°C up to +40°C, -50°C up to

+50/60°C depending on version

on demand

Rated voltage: 220V - 240V AC, 50/60Hz

#### narrow beam

89000 0001	<b>d9000/4201LOM</b>	48	4.400	92	T6	40	A++	HST70/HIE150/HME250	16,8
89000 0002	<b>d9000/4203LOM</b>	90	7.700	86	T6	40	A+	HST150	16,8

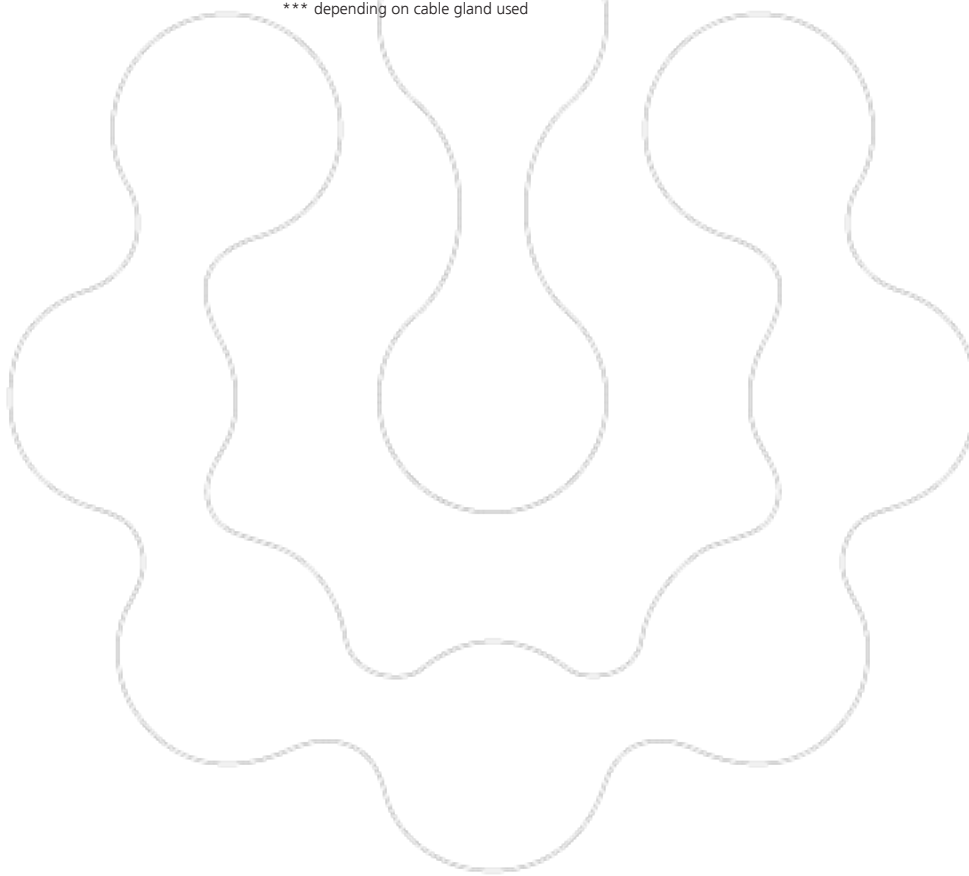
#### narrow wide beam

89000 0004	<b>d9000/4201LOWW</b>	48	4.400	92	T6	40	A++	HST70/HIE150/HME250	16,8
89000 0005	<b>d9000/4203LOWW</b>	90	7.700	86	T6	40	A+	HST150	16,8

\* see notes

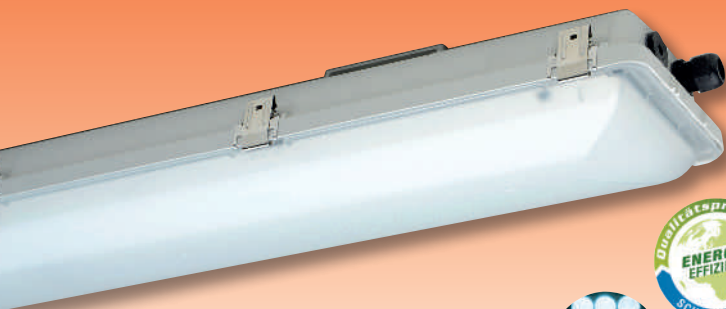
\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\*\* depending on cable gland used



## Accessories / Spare Parts

Article no.	Type	
90117 9000	<b>2537</b>	Ex-protected plastic cable gland M25 x 1,5
90118 9000	<b>2538</b>	Ex-protected plastic plug M25 x 1,5



## ExeLed 2

### LED-Light Fitting for Ex-Zones 2/22

### Series nD866...

#### Application:

Hazardous locations of zones 2 (gas) and 22 (dust).

#### Design:

**Housing:** Glass fibre reinforced polyester resin.

**Cover:** Injected polycarbonate, frosted (F) or clear.

**Closure:** Stainless steel clips (KE), two of them as safety clip (KES), to be opened with screwdriver only.

**Reflector:** Aluminium, painted, carrying the

LED-modules and all electrical components, clipped into the cover, suspendable.

**Connection:** 3 poles up to 2,5 mm<sup>2</sup>.

**Cable entries:** 3 entries M25 x 1,5, (2 glands - one of them is plugged)

**Standard:** Facing downwards or forwards.

#### Mechanical installation:

Mounting accessories see spare parts/ accessories. Sealing gaskets for direct ceiling mounting are included.

#### Technical Data:

**LED:** Line modules 5,000K, CRI typically 80,

Lifetime: L<sub>70B10</sub> > 100.000h

L<sub>80B50</sub> > 100.000h

L<sub>90B50</sub> > 50.000h

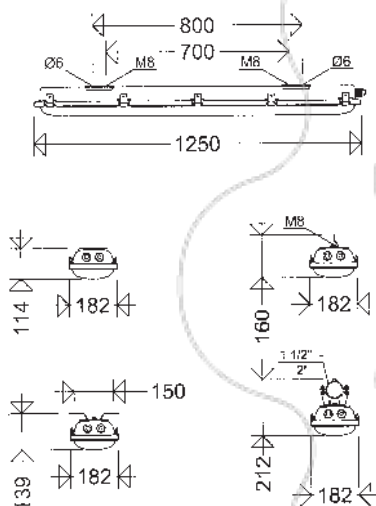
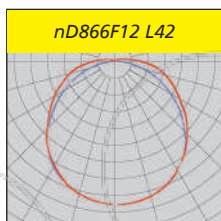
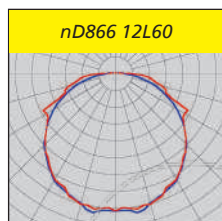
at max. ambient temperature

**ECG:** 220-240V AC/DC, 0 or 50-60Hz, overvoltage, overload, short circuit, excess temperature protection

#### Options:

- for connection to group or central battery (light fittings of version ZB only)
- with monitoring module for monitoring

- the individual light fitting
- dimmable via DALI-interface (DIMD)
- with through-wiring 5 x 2,5mm<sup>2</sup>



#### SCHUCH Quality - your advantage:

- Reflector and cover in sandwich design to protect the LED-Modules from mechanical or electrostatic damages due to accidental contact.
- homogeneous illumination by using frosted diffusers (versions nD866F..) no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering index CRI typically 80, according to the workplace guide lines suitable for nearly all plant locations
- external mounting system for variable mounting distances and easy installation (retaining clips HK865 P)
- ECG and reflector with LED-modules replaceable by qualified personnel on-site



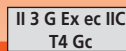
#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W] **	Cover frosted	Cover clear	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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## nD866...



### Note:

This light fitting is not suitable for applications in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.

Ignition protection: ec

Marking:

II 3 G Ex ec IIC T4 Gc (Zone 2)

II 3 D Ex tc IIIC T80°C Dc (Zone 22)

Rated voltage: 220-240V AC/DC, 0 or 50-60Hz.

Permissible ambient temperature: -30°C see article table

### optimized for energy consumption

86600 0002	nD866F 12L42	31	4.420	143	•	•	40	A++	2 x 36W	4,7
86600 0003	nD866F 12L60	46	6.060	132	•	•	40	A++	2 x 58W	4,7
86600 0012	nD866 12L42	31	4.690	151	•	•	40	A++	2 x 36W	4,7
86600 0013	nD866 12L60	46	6.430	140	•	•	40	A++	2 x 58W	4,7

### with high luminous flux

86600 0004	nD866F 12L85	61	8.700	143	•	•	40	A++	> 2 x 58W	4,9
86600 0014	nD866 12L85	61	9.250	152	•	•	40	A++	> 2 x 58W	4,9

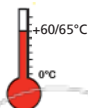
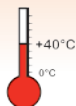
### for high temperature <sup>1)</sup>

86600 0005	nD866F 12L42 H65	31	4.420	143	•	•	65	A++	2 x 36W	4,7
86600 0008	nD866F 12L60 H60	46	6.060	132	•	•	60	A++	2 x 58W	4,7
86600 0015	nD866 12L42 H65	31	4.690	151	•	•	65	A++	2 x 36W	4,7
86600 0017	nD866 12L60 H60	46	6.430	140	•	•	60	A++	2 x 58W	4,7

\* see notes

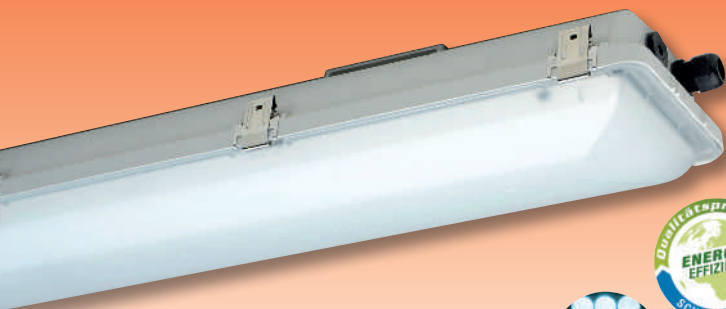
\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

<sup>1)</sup> through-wiring or looping the cable is not permissible.



## Accessories / Spare Parts

Article No.	Type	
<b>Spare covers</b>		
86601 9001	8654F	PC, frosted
86601 9000	8654	PC, clear
<b>Fasteners</b>		
90055 9004	KE/KES VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.)
<b>Glands/breather</b>		
90117 9006	2537 G	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9006	2538 G	ex-protected plastic plug M25 x 1,5 with nut
90259 9000	Klimastutzen EX	M25 x 1,5
<b>Mounting material</b>		
86501 9003	HK 865 P	2 retaining clips for variable mounting distances
90001 0002	H8V P	2 suspensions eyes with bolts, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0004	W26 P	2 wall mounting angles
26000 0002	W26/30 P	2 wall mounting angles 30°
26000 0003	W26/45 P	2 wall mounting angles 45°



## ExeLed 2 N

### LED-Emergency Light Fitting for Ex-Zones 2/22 Series nD867...

#### Application:

Hazardous locations of zones 2 and 22, in workshops for the illumination of the escape routes etc. according to DIN VDE 0108.

#### Design:

**Housing:** Glass fibre reinforced polyester resin. Version H with separate battery box at one small side of the housing.

**Cover:** Injected polycarbonate, frosted (F) or clear.

**Closure:** Stainless steel clips (KE), two of them as safety clip (KES), to be opened with

screwdriver only.

**Reflector:** Aluminium, painted, carrying the LED-modules and all electrical components, clipped into the cover, suspendable.

**Connection:** 4 poles up to 2,5 mm<sup>2</sup>.

**Cable entries:** 3 entries M25 x 1,5, (2 glands - one of them is plugged)

**Standard:** Facing downwards or forwards.

**Mechanical installation:**

Mounting accessories see spare parts/accessories. Sealing gaskets for direct ceiling mounting are included.

#### Technical Data:

**LED:** Line modules 5,000K, typically CRI 80, Lifetime  $L_{70B_{10}} > 100.000h$ ,  $L_{80B_{50}} > 100.000h$  at max. ambient temperature

**Incorporated NiCd battery,** electronic charger, short circuit protected battery and reverse battery protection

**Electronic deep discharge protection:** acc. to EN 61347-2-7

**Re-charging time:** 24h, acc. to EN 60598-2-22

**Automatic monitoring:** of the emergency light fitting according to EN 62034, indication of the test results by 2-coloured LED (luminescence diode) at the luminaire

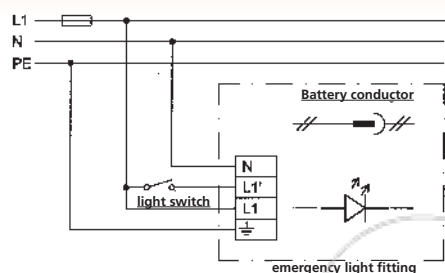
#### Mode of operation:

**maintained operation** = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

**stand-by operation** = switching on in case of mains failure.

#### Options:

– dimmable via DALI-interface (DIMD) – inhibiting facility

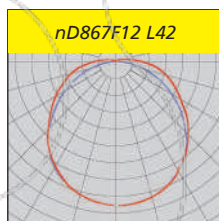
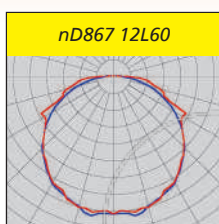


#### Starting:

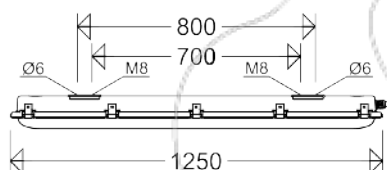
Connect battery conductor.

**Out-of-operation:** separate battery conductor.

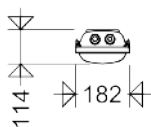
**Stand-by operation:** Do not connect L1'.



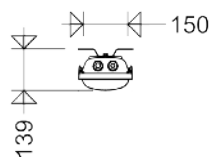
#### nD867... 12L.. (without battery box)



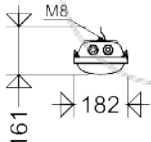
with HK865 P



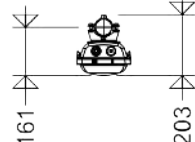
with 15AP P



with H8V P



with RO84 ... P



#### SCHUCH Quality - your advantage:

- reliable, fail-safe and long-lasting
  - operation in maintained, switched maintained or stand-by mode possible
  - multifunctional LED with coded indication of the functions, states and potential faults of the electronic device and the battery
  - automatic weekly function test
  - automatic annual duration test
  - manual actuation of duration test is possible
  - easy battery replacement due to connector
- flexible when installed in the light band



#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous flux [lm] * (emergency)	Luminous efficacy [lm/W] **	Cover frosted	Cover clear	1h operation time	3h operation time	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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#### Note:

This light fitting is not suitable for applications in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.

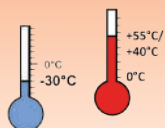
## nD867...



II 3 G Ex ec IIC  
T4 Gc

II 3 D Ex tc IIIC  
T80°C Dc

IP66



Ignition protection: ec

Marking:

II 3 G Ex ec IIC T4 Gc (Zone 2)

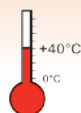
II 3 D Ex tc IIIC T80°C Dc (Zone 22)

Rated voltage: 220-240V AC, 50-60Hz.

Permissible ambient temperature:

-30°C up to +55°C

reduced emergency light duration if operated below 0°C. For nD867 H Nominal range acc. to EN60598-2-22, 0°C up to 45°C.



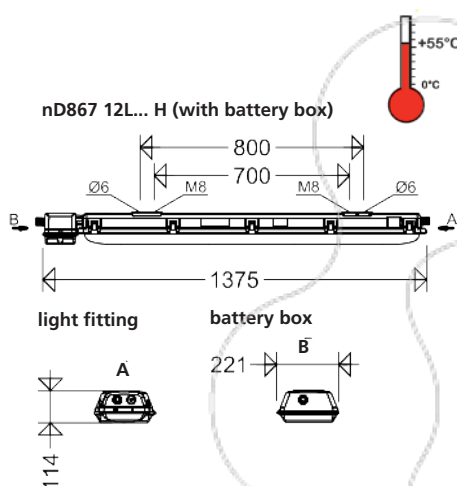
86700 0001	nD 867F 12L42/1/1,6	33	4.420	750	134	•	•	•	40	A++	2 x 36W	5,1
86700 0002	nD 867F 12L60/1/1,6	48	6.060	750	126	•	•	•	40	A++	2 x 58W	5,1
86700 0011	nD 867 12L42/1/1,6	33	4.690	800	142	•	•	•	40	A++	2 x 36W	5,1
86700 0012	nD 867 12L60/1/1,6	48	6.430	800	134	•	•	•	40	A++	2 x 58W	5,1
86700 0101	nD 867F 12L42/3/4	33	4.420	750	134	•	•	•	40	A++	2 x 36W	5,5
86700 0102	nD 867F 12L60/3/4	48	6.060	750	126	•	•	•	40	A++	2 x 58W	5,5
86700 0111	nD 867 12L42/3/4	33	4.690	800	142	•	•	•	40	A++	2 x 36W	5,5
86700 0112	nD 867 12L60/3/4	48	6.430	800	134	•	•	•	40	A++	2 x 58W	5,5

\*\*\*. versions L60 with through-wiring Tmax +35°C

### for high temperatures up to +55°C

#### Design:

Same as standard version, but with separate battery box at one small side of the housing.



86700 0201	nD 867F 12L42/1/1,6 H	33	4.420	750	134	•	•	•	55	A++	2 x 36W	6,1
86700 0202	nD 867F 12L60/1/1,6 H	48	6.060	750	126	•	•	•	55	A++	2 x 58W	6,1
86700 0211	nD 867 12L42/1/1,6 H	33	4.690	800	142	•	•	•	55	A++	2 x 36W	6,1
86700 0212	nD 867 12L60/1/1,6 H	48	6.430	800	134	•	•	•	55	A++	2 x 58W	6,1
86700 0301	nD 867F 12L42/3/4 H	33	4.420	750	134	•	•	•	55	A++	2 x 36W	6,5
86700 0302	nD 867F 12L60/3/4 H	48	6.060	750	126	•	•	•	55	A++	2 x 58W	6,5
86700 0311	nD 867 12L42/3/4 H	33	4.690	800	142	•	•	•	55	A++	2 x 36W	6,5
86700 0312	nD 867 12L60/3/4 H	48	6.430	800	134	•	•	•	55	A++	2 x 58W	6,5

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

## Accessories / Spare Parts

Article No.	Type	
<b>Spare batteries</b>		
90222 9029	AKKU NiCd 6V 4,0Ah	Spare battery 4.0Ah
90222 9030	AKKU NiCd 6V 1,6Ah	Spare battery 1.6Ah
90222 9021	AKKU 2627 4,0Ah	Spare battery 4.0Ah (Types ...H)
90222 9023	AKKU 8020 1,6Ah	Spare battery 1.6Ah (Types ...H)
<b>Spare covers</b>		
86601 9001	8654F	PC, frosted
86601 9000	8654	PC, clear
<b>Glands/breather</b>		
90117 9006	2537 G	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9006	2538 G	ex-protected plastic plug M25 x 1,5 with nut
90259 9000	Klimastutzen EX	M25 x 1,5
<b>Mounting material</b>		
86501 9003	HK 865 P	2 retaining clips for variable mounting distances
90001 0002	H8V P	2 suspensions eyes with bolts, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0004	W26 P	2 wall mounting angles
26000 0002	W26/30 P	2 wall mounting angles 30°
26000 0003	W26/45 P	2 wall mounting angles 45°



## Compact LED Emergency and Escape Sign Light Fitting for Ex-Zones 2/22 Series nD8611/... LED

### Application:

For identifying escape routes in hazardous areas of zones 2 and 22.

### Design:

**Housing:** Diecast aluminium, natural finish, gear set located inside the housing, wired ready for connection.

**Cover:** Polycarbonate opalescent white, (W), foamed silicone gasket. (Pictograms – if required – to be ordered separately, see

accessories).

**Connection terminal:** 3 or 4 poles, clamping range max. 2,5mm<sup>2</sup>.

**Cable entries:** 1 cable gland M20 x 1,5 on the front side.

**Mounting:** 2 outer fixing points.

### Technical Data:

**LED:** Highpower-LED, 6.500K, CRI > 70, L<sub>70</sub>B<sub>10</sub> > 50.000h at max. ambient temperature

### Versions with self-contained battery:

**Built-in NiMH battery.** A constant trickle charge to the battery ensures readiness of operation at all times.

**Automatic monitoring** the emergency light fitting acc. to EN 62034. Indication of the test results by 2-colour LED on the light fitting.

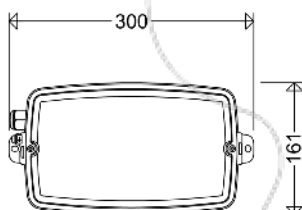
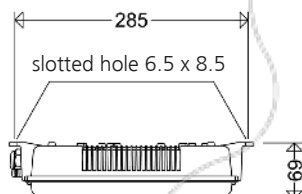
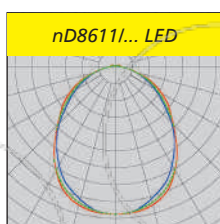
**Electronic deep discharge protection** acc. to EN 61347-2-7

**Recharging time:** 24 h, acc. to EN 60598-2-22

**Modes of operation:** Maintained or stand-by operation

### Options:

- cable looping on one side
- ECG for safety extra-low voltage (24VDC)
- for connection to group or central battery (light fittings of version ZB only)
- with monitoring module for monitoring the individual light fitting
- for different ambient temperatures

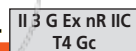


### SCHUCH Quality - your advantage:

- safety in an emergency case, instant full light output (100% luminous flux) also at low temperatures
- stable luminous flux in emergency operation independent from the ambient temperatures
- outstanding visibility of the indication sign due to a superb and even illumination of the pictogram
- reduced battery capacity
- little thermal stress
- low weight

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous flux [lm] * (emergency)	Luminous efficacy [lm/W]	1h operation time	3h operation time	Energy efficiency class	Weight [kg] (without packing material)
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### nD8611/201 W



**Ignition protection:** nR

**Explosion protection:**

II 3 G Ex nR IIC T4 Gc Gc (Zone 2)

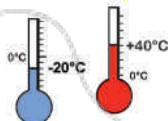
II 3 D Ex tc IIC T80°C Dc (Zone 22)

**Rated voltage:** 220-240V AC, 50/60Hz

**Ambient temperature:**

-20°C up to +40°C

(further versions upon request).



86110 0001	nD8611/201W	4	100	25				A++	0,9
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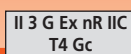
### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

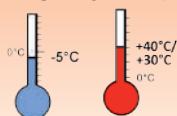
All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous flux [lm] * (emergency)	Luminous efficacy [lm/W]	1h operation time	3h operation time	Energy efficiency class	Weight [kg] (without packing material)
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## nD8611/201/. W



### emergency/escape route light fitting with built-in battery



Ignition protection: nR

Explosion protection:

II 3 G Ex nR IIC T4 Gc Gc (Zone 2)

II 3 D Ex tc IIIC T80°C Dc (Zone 22)

Rated voltage: 220-240V AC, 50/60Hz

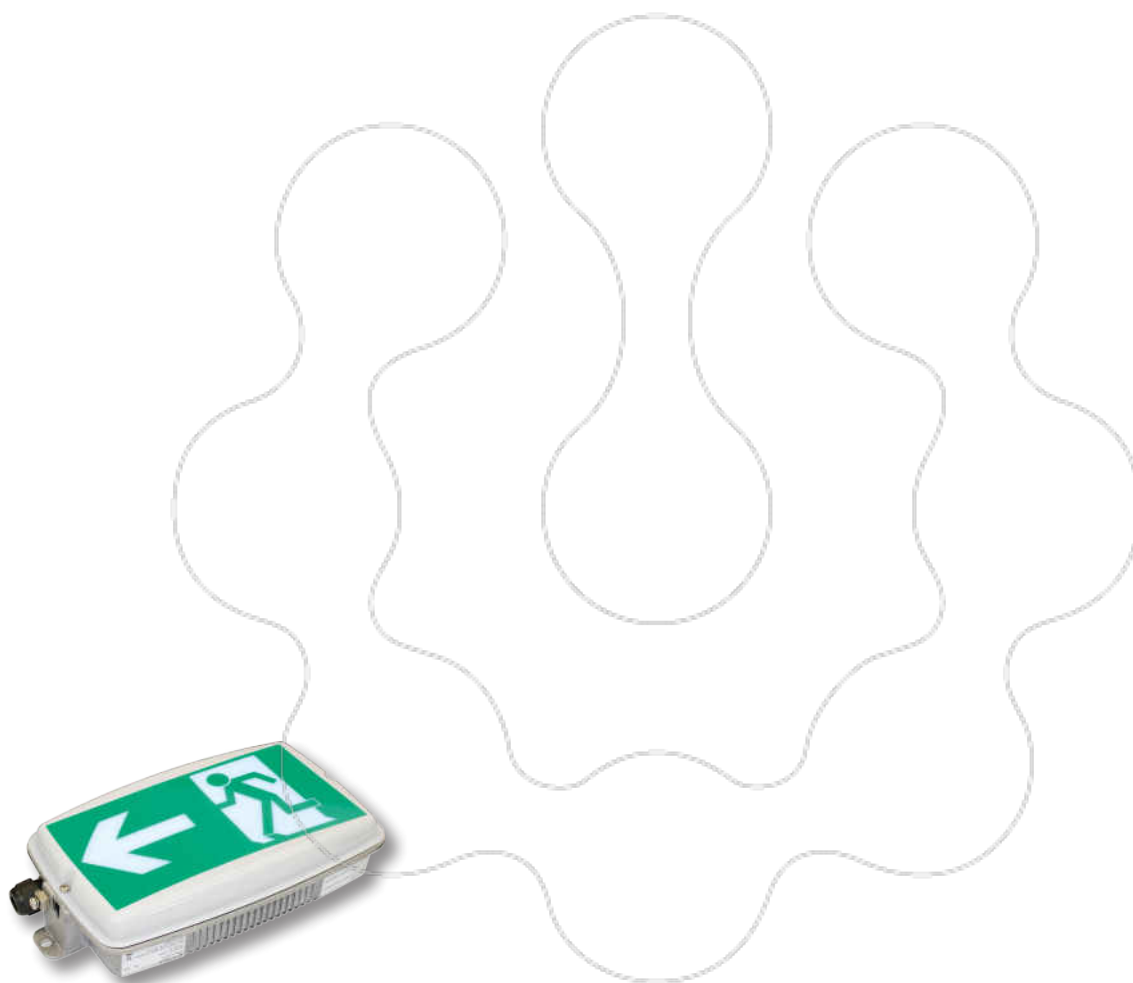
Ambient temperature:

-5°C bis +30°C (maintained operation)

-0°C bis +40°C (standby operation)

86111 0002	nD8611/201/1W	5	100	100	20	•		A++	1,1
86111 0003	nD8611/201/3W	5	100	100	20		•	A++	1,3

\* see notes



Type nD8611/... with pictogram 220/110/35

#### Self-adhesive pictogram



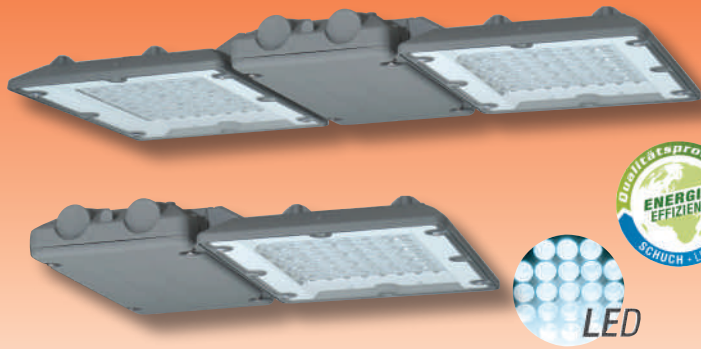
220/110/33 .../34 .../35

For marking escape routes acc.to DIN EN ISO 7010 and ASR A1.3.

Viewing = 22m.

## Accessories / Spare Parts

Article no.	Type	
<b>Spare cover</b>		
36004 9002	3611/02	PC, white opalescent
<b>Self adhesive legends for series 3611 and 8611</b>		
12112 0101	220/110/33	Emergency exit to the left
12112 0102	220/110/34	Emergency exit to the right
12112 0103	220/110/35	Emergency exit below
<b>Cable entries</b>		
90120 9008	2531 G	Ex-plastic cable gland M20 x 1,5 with nut
90121 9005	2532 G	Ex-plastic cable gland M20 x 1,5 with plug and with nut
<b>Spare-batteries</b>		
90222 9026	Akku 8620	Spare-battery 1h
90222 9027	Akku 8621	Spare-battery 3h



## LED High Bay Light Fittings for Ex-Zone 2/22

### Series nD8301/nD8302...

#### Application:

Hazardous locations, of Zones 2 (gas atmosphere) and 22 (dust atmosphere), production halls and warehouses, in industrial sectors, workshops and chemical factories etc.

#### Design:

Two versions are available: 1 or 2 LED wings for substitution of 250W / 400W high pressure discharge lamps

Housing: Diecast aluminum, DB 702N

(mica-iron paint). LED-housing with LED modules, optics behind tempered safety glass

(IK08). ECG housing with integrated electronic control gear, prewired on terminals.

Optics: Narrow-wide respectively wide beam without lenses.

Connection: 3 poles up to 2,5.

Entries: 1 gland M25 x 1,5.

Mounting material: See accessories/spare parts.

General Purpose: Beaming downwards (0°).

#### Technical Data:

LED: Highpower-LED 4,000K, CRI > 80, life cycle  $L_{70}$  100.000h at max. ambient temperature.

Version nD830. L ...: Mid-Power-LED 4,000K,  $R_a$  > 80, life cycle  $L_{70}$  > 70.000h at max. ambient temperature (see notes).

ECG: 220 - 240V, 50-60Hz. Surge voltage resistance 4kV, excess temperature protection-, overload and short circuit protection.

Note: Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

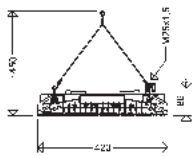
DALI-interface for dim light operation

Ambient temperature: -20°C up to +40°C / +50°C / +60°C (see article tables)

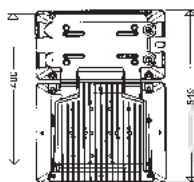
#### Options:

- 5.700K ( $R_a$  > 70)
- light output reduction (LR) per 230V control line
- uniform luminous flux option (CL) to keep the light output on same level for the whole life cycle
- narrow beam version (T)

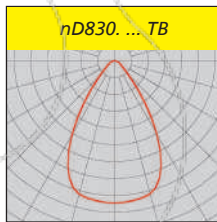
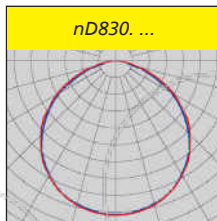
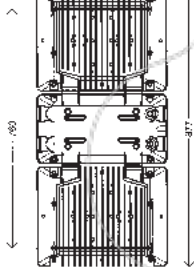
- asymmetrical optics (A)
- version with additional borings for wall mounting by means of angle brackets (swivel range 45°)
- for connection to group or central battery systems (ZB)
- cable looping on one side



nD8301...



nD8302...



#### SCHUCH Quality - your advantage:

- optimized thermo management due to direct adaption of the LED modules at the housing, huge heat sink with excellent heat dissipation
- DALI interface (standard) for dimmed operation
- colour rendering index CRI > 80
- uniform illumination due to the „Multi-Layer Principle“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping. No dark zones if any single LED would fail and the uniformity of the illumination is kept.
- low maintenance and downtime costs because of extended maintenance intervals
- future proof by using standardized LED-modules (Zhaga)

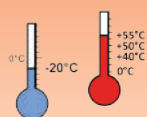
#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W] **	T max [°C]	Wide beam	Narrow-wide beam	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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Ignition protection: nR

Rated voltage: 220V - 240V, 50-60Hz

Marking:

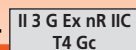
Permissible ambient temperature:

II 3 G Ex nR IIC T4 Gc (Zone 2)

-20°C up to +40°C / +50°C / +55°C

II 3 D Ex tc IIIC T100°C Dc (Zone 22)

## nD8301/nD8302...



... for ambient temperatures up to +40°C

### 1 LED wing

83012 0001	nD8301 L115	100	13.530	135	40	•		A++	HME 250	8,8
83012 0002	nD8301 6403	135	15.140	112	40	•		A+	HIT 250/HME 400	8,9
83012 0003	nD8301 6403TB	135	15.260	113	40	•		A+	HIT 250/HME 400	8,9

### 2 LED wings

83012 0101	nD8302 L230	200	27.070	135	40	•		A++	HIT 400	14,5
83012 0102	nD8302 12803	270	30.290	112	40	•		A+	HIT 400	14,6
83012 0103	nD8302 12803TB	270	30.520	113	40	•		A+	HIT 400	14,6

... for ambient temperatures up to +50°C/+55°C

### 1 LED wing

83012 0011	nD8301 L115 H55	100	13.530	135	55	•		A++	HME 250	8,8
83012 0007	nD8301 6403 H50	135	15.140	112	50	•		A+	HIT 250/HME 400	8,9

### 2 LED wings

83012 0111	nD8302 L230 H55	200	27.070	135	55	•		A++	HIT 400	14,5
83012 0104	nD8302 12803 H50	270	30.290	112	50	•		A+	HIT 400	14,6

\* see notes

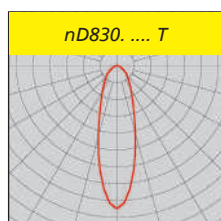
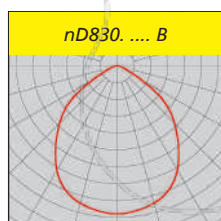
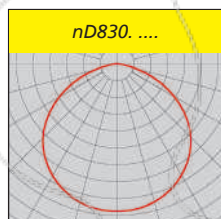
\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

NEW

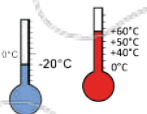
## Further series with Mid-Power-LED

Optic: Without optic wide beam, with optic wide- (B) or narrow-beam (T)

LED: Mid-Power-LED 4,000K, CRI > 80, life cycle L<sub>70</sub> up to 100.000h depending on version, at max. ambient temperature L<sub>70</sub> > 50.000 Std



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Light output [lm/W]	Tmax [°C]	wide beam	narrow-beam	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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Ignition protection: nR

Rated voltage: 220V - 240V, 50-60Hz

Marking:

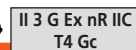
Permissible ambient temperature:

II 3 G Ex nR IIC T4 Gc (Zone 2)

-20°C up to +40°C / +50°C / +60°C

II 3 D Ex tc IIIC T100°C Dc (Zone 22)

## nD8301/nD8302...



... for ambient temperatures up to +40°C

### 1 LED wings

83010	nD8301 L110	67	10.950	163	40	•		A++	HME 250	8,9
83010	nD8301 L160	96	15.220	159	40	•		A++	HIT 250/HME 400	8,9
83010	nD8301 L210	135	20.590	153	40	•		A++	HIE 400	8,9
83010	nD8301 L110B	67	10.750	160	40	•		A++	HME 250	9,2
83010	nD8301 L160B	96	14.940	156	40	•		A++	HIT 250/HME 400	9,2
83010	nD8301 L210B	135	20.210	150	40	•		A++	HIE 400	9,2
83010	nD8301 L110T	67	10.490	157	40		•	A++	HME 250	9,2
83010	nD8301 L160T	96	14.580	152	40		•	A++	HIT 250/HME 400	9,2
83010	nD8301 L210T	135	19.720	146	40		•	A++	HIE 400	9,2

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Light output [lm/W]	Tmax [°C]	wide beam	narrow-beam	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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## nD8301/nD8302...



... for ambient temperatures up to +40°C

### 2 LED wings

83020	nD8302 L220	134	21.910	164	40	•		A++	HIE 400	14,5
83020	nD8302 L320	192	30.440	159	40	•		A++	HIT 400	14,5
83020	nD8302 L420	270	41.180	153	40	•		A++	2 x HIE 400	14,5
83020	nD8302 L220B	134	21.500	160	40	•		A++	HIE 400	14,6
83020	nD8302 L320B	192	29.870	156	40	•		A++	HIT 400	14,6
83020	nD8302 L420B	270	40.410	150	40	•		A++	2 x HIE 400	14,6
83020	nD8302 L220T	134	20.980	157	40		•	A++	HIE 400	14,6
83020	nD8302 L320T	192	29.160	152	40		•	A++	HIT 400	14,6
83020	nD8302 L420T	270	39.440	146	40		•	A++	2 x HIE 400	14,6

... for ambient temperatures up to +50°C

### 1 LED wing

83010	nD8301 L210 H50	135	20.590	153	50	•		A++	HIE 400	8,9
83010	nD8301 L210B H50	135	20.210	150	50	•		A++	HIE 400	9,2
83010	nD8301 L210T H50	135	19.720	146	50		•	A++	HIE 400	9,2

### 2 LED wings

83020	nD8302 L420 H50	270	41.180	153	50	•		A++	2 x HIE 400	14,5
83020	nD8302 L420B H50	270	40.410	150	50	•		A++	2 x HIE 400	14,6
83020	nD8302 L420T H50	270	39.440	146	50		•	A++	2 x HIE 400	14,6

... for ambient temperatures up to +60°C

### 1 LED wing

83010	nD8301 L110 H60	67	10.950	163	60	•		A++	HME 250	8,9
83010	nD8301 L160 H60	96	15.220	159	60	•		A++	HIT 250/HME 400	8,9
83010	nD8301 L110B H60	67	10.750	160	60	•		A++	HME 250	9,2
83010	nD8301 L160B H60	96	14.940	156	60	•		A++	HIT 250/HME 400	9,2
83010	nD8301 L110T H60	67	10.490	157	60		•	A++	HME 250	9,2
83010	nD8301 L160T H60	96	14.580	152	60		•	A++	HIT 250/HME 400	9,2

### 2 LED wings

83020	nD8302 L220 H60	134	21.910	164	60	•		A++	HIE 400	14,5
83020	nD8302 L320 H60	192	30.440	159	60	•		A++	HIT 400	14,5
83020	nD8302 L220B H60	134	21.500	160	60	•		A++	HIE 400	14,6
83020	nD8302 L320B H60	192	29.870	156	60	•		A++	HIT 400	14,6
83020	nD8302 L220T H60	134	20.980	157	60		•	A++	HIE 400	14,6
83020	nD8302 L320T H60	192	29.160	152	60		•	A++	HIT 400	14,6

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

## Accessories / Spare Parts

Article no.	Type	
33001 9001	3301/10	spare safety glass
90117 9006	2537 G	plastic gland M25x1,5 with nut
90118 9006	2538 G	plastic plug M25x1,5 with nut
33001 9004	3301/3302 Y P	1 pair of Y-ropes, (2-point-mounting)
33001 9002	3301/3302 D	1 pair of angle brackets for direct ceiling mounting
33001 9003	3301 W	1 angle bracket, adjustable, for wall mounting series nD8301... <sup>1)</sup>
33001 9007	3302 W	1 angle bracket, adjustable, for wall mounting series nD8302... <sup>1)</sup>

1) For mounting these brackets additional mounting holes are required on the luminaire. Please indicate way of mounting when ordering the luminaire.



**NEW**

## LED-Floodlight/ plane surface floodlight for Ex-Zone 2/22 Series nD8700...

### Applications:

Hazardous locations of Zones 2 (gas atmosphere) and 22 (dust atmosphere), stockyards, building sites, open-air grounds, chemical and petrochemical areas etc..

### Design:

Housing and glass retaining frame are made from diecast aluminium, DB 702N (mica-iron paint). The glass frame is locked by 2 socket head cap screws (M6) and it is hinged to the body after opening. The electrical components are located inside, silicone gasket.

**Front cover:** Thermal safety glass, impact resistance IK08.

**Optic:** lens optics with narrow-wide, narrow, or asymmetric light distribution, or without Optics wide beam, Multi-Layer technology.

**Connection terminal:** 3-pole terminal max. clamping range 2,5mm².

**Cable entry:** 1 gland M20 x 1.5.

**Installation:** mounting bracket, swivel range 180°.

**Standard Mounting:** Facing downwards or horizontal.

### Technical Data:

**LED:** Highpower-LED 4,000K, CRI > 70, life cycle  $L_{70B_{10}}$  100.000h at max. ambient temperature.

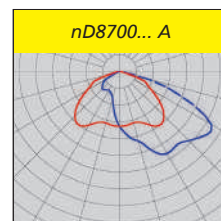
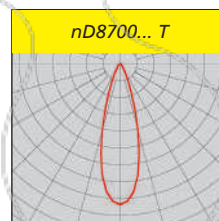
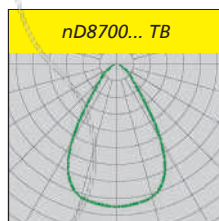
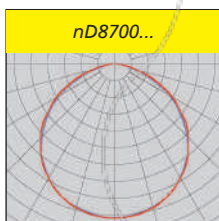
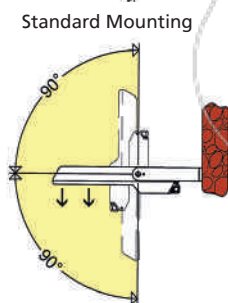
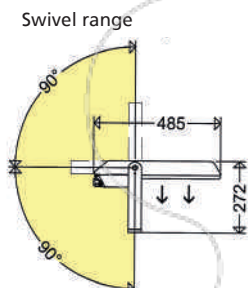
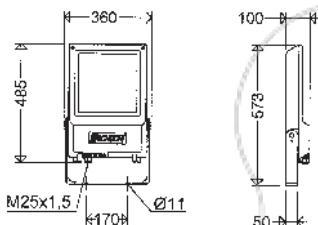
**ECG:** 220 - 240V, 50-60Hz, life cycle 100.000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection, temperature monitoring of the LED modules

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

**Ambient temperature:** -30°C up to +40°C

### Optionen:

- light output reduction (LR) per 230V control line (dimable) the whole life cycle
- DALI interface for dim light operation (DIMD) – for higher ambient temperatures up to +50°C
- uniform luminous flux option (CL) to keep the light output on same level for – hard coating



### Schuch Quality - your advantage:

- optimal thermal management possible by direct connection from the LED to the diecast aluminium housing, large cooling surface, excellent thermal conductivity
- increased safety through temperature monitoring of the LED modules
- uniform illumination due to the „Multi-Layer Principle“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
- future design due to use of ZHAGA conform LED modules
- efficient 1:1 replacement for conventional HIT 250 W floods

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Explosion protected  
Light Fittings

Article no.	Type	Power consumption [W] *	Luminous flux ca. [lm] *	Luminous efficacy [lm/W] **	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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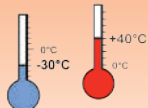
## nD8700/ ...



II 3 G Ex nR IIC  
T4 Gc

II 3 D Ex tc IIIC  
T100°C Dc

IP66



Ignition protection: nR

Marking:

II 3 G Ex nR IIC T4 Gc

II 3 D Ex tc IIIC T100°C Dc

(Zone 2)

(Zone 22)

Rated voltage: 220V up to 240V AC,  
50/60 Hz

Permissible ambient temperature:

-30°C up to +40°C

### wide beam

87000 0007	<b>nD8700 4803</b>	104	13.220	127	40	A++	HIT/HST 150W	9,6
87000 0001	<b>nD8700 6403</b>	137	17.150	125	40	A++	HIT 250W	9,6

### narrow wide beam

87000 0008	<b>nD8700 4803TB</b>	104	13.070	126	40	A++	HIT/HST 150W	9,6
87000 0002	<b>nD8700 6403TB</b>	137	16.950	124	40	A++	HIT 250W	9,6

### narrow beam

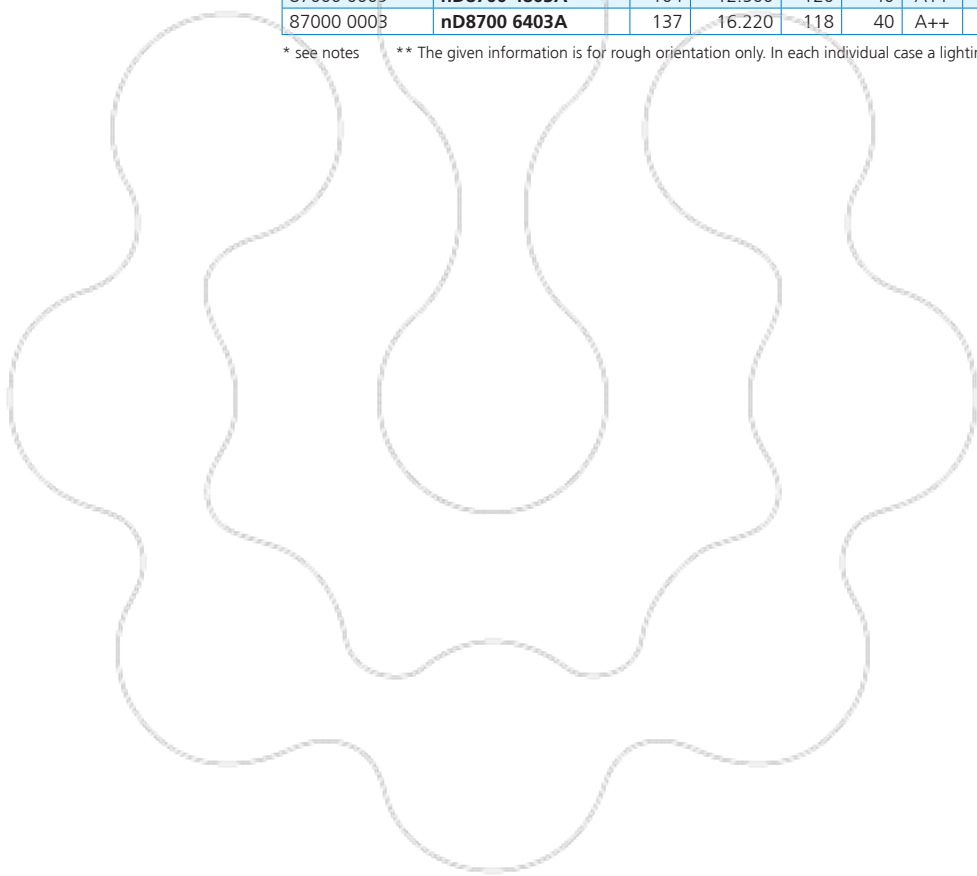
87000 0014	<b>nD8700 4803T</b>	104	13.630	131	40	A++	HIT/HST 150W	9,6
87000 0013	<b>nD8700 6403T</b>	137	17.680	129	40	A++	HIT 250W	9,6

### asymmetrical beam (plane surface floodlight)

87000 0009	<b>nD8700 4803A</b>	104	12.500	120	40	A++	HIT/HST 150W	9,6
87000 0003	<b>nD8700 6403A</b>	137	16.220	118	40	A++	HIT 250W	9,6

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



## Accessories / Spare Parts

Article no.	Type	
90120 9000	<b>2531</b>	ex-protected plastic cable gland M20 x 1,5
90122 9000	<b>2533</b>	ex-protected plastic cable gland M20 x 1,5 with plug
90270 0005	<b>ROB 60/76</b>	pipe clamp for pole Ø60-76mm



## LED-Floodlight/ plane surface floodlight for Ex-Zone 2/22 Series nD8800...

### Applications:

Hazardous locations of Zones 2 (gas atmosphere) and 22 (dust atmosphere), stockyards, building sites, open-air grounds, chemical and petrochemical areas etc..

### Design:

Housing and glass retaining frame are made from diecast aluminium, DB 702N (mica-iron paint). The glass frame is locked by 2 socket head cap screws (M6) and it is hinged to the body after opening. The electrical components are located inside, silicone gasket.

**Front cover:** Thermal safety glass, impact resistance IK08.

**Optic:** lens optics with narrow-wide, narrow, or asymmetric light distribution, or without Optics wide beam, Multi-Layer technology.

**Connection terminal:** 3-pole terminal, max. clamping range 2,5mm².

**Cable entry:** 1 gland M25 x 1.5.

**Installation:** mounting bracket, swivel range 180°.

**Standard Mounting:** Facing downwards or horizontal.

### Technical Data:

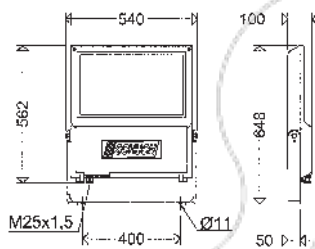
**LED:** Highpower-LED 4,000K, CRI > 70, life cycle  $L_{70B_{10}}$  100.000 h at max. ambient temperature.

**ECG:** 220 - 240V, 50-60Hz, life cycle 100.000h. Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection, temperature monitoring of the LED modules

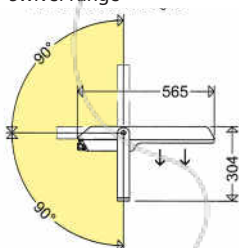
**Ambient temperature:** -30°C up to +40°C

### Optionen:

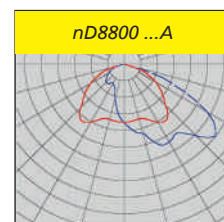
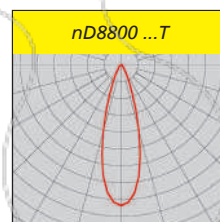
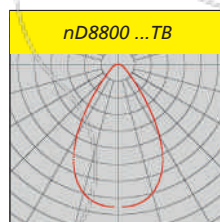
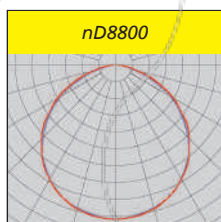
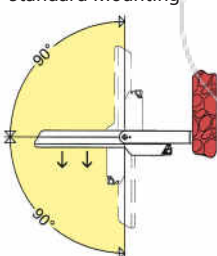
- light output reduction (LR) per 230V control line (dimable)
- DALI interface for dim light operation (DIMD)
- bracket for pole mounting
- uniform luminous flux option (CL) to keep the light output on same level for the whole life cycle
- for higher ambient temperatures up to +50°C
- hard coating



### Swivel range



### Standard Mounting



### Schuch Quality - your advantage:

- optimal thermal management possible by direct connection from the LED to the diecast aluminium housing, large cooling surface, excellent thermal conductivity
- increased safety through temperature monitoring of the LED modules
- uniform illumination due to the „Multi-Layer Principle“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
- future design due to use of ZHAGA conform LED modules
- efficient 1:1 replacement for conventional HIT 400 W floods

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption [W] *	Luminous flux ca. [lm] *	Luminous efficacy [lm/W] **	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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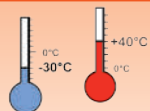
## nD8800/ ...



II 3 G Ex nR IIC  
T4 Gc

II 3 D Ex tc IIIC  
T100°C Dc

IP66



Ignition protection: nR

Marking:

II 3 G Ex nR IIC T4 Gc

II 3 D Ex tc IIIC T100°C Dc

(Zone 2)

(Zone 22)

Rated voltage: 220V up to 240V AC,  
50/60 Hz

Permissible ambient temperature:

-30°C up to +40°C

### wide beam

88000 0001	<b>nD8800 6403</b>	137	18.160	133	40	A++	HIT 250W	15,9
88000 0007	<b>nD8800 12803</b>	274	34.640	126	40	A++	HIT 400W	17,1

### narrow wide beam

88000 0002	<b>nD8800 6403TB</b>	137	17.520	128	40	A++	HIT 250W	15,9
88000 0008	<b>nD8800 12802TB</b>	194	26.320	136	40	A++	HIE 400W	17,2

### narrow beam

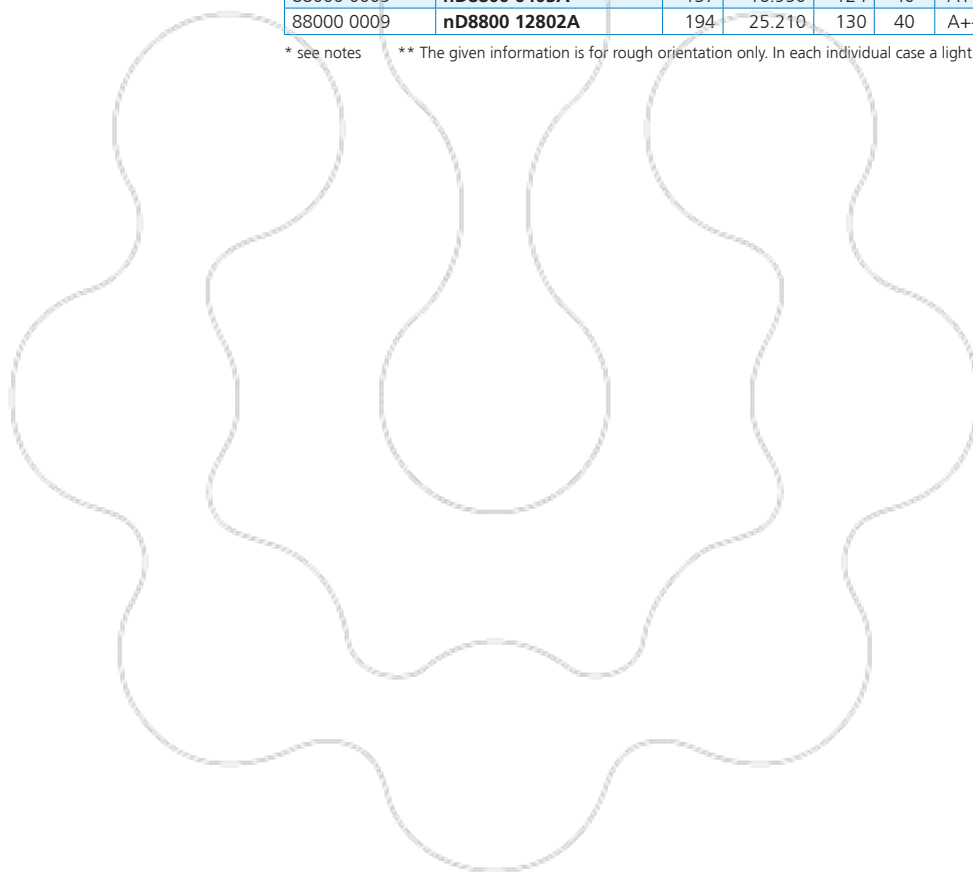
88000 0013	<b>nD8800 6403T</b>	137	17.740	129	40	A++	HIT 250W	15,9
88000 0014	<b>nD8800 12802T</b>	194	27.170	140	40	A++	HIE 400W	17,2

### asymmetrical beam (plane surface floodlight)

88000 0003	<b>nD8800 6403A</b>	137	16.950	124	40	A++	HIT 250W	15,9
88000 0009	<b>nD8800 12802A</b>	194	25.210	130	40	A++	HIE 400W	17,2

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



## Accessories / Spare Parts

Article no.	Type	
90117 9000	<b>2537</b>	ex-protected plastic cable gland M25 x 1,5
90119 9000	<b>2539</b>	ex-protected plastic cable gland M25 x 1,5 with plug

## Aluminium Carrier Rails for Continuous Row Installation Series TRS 2000... and AL...

### Applications:

For rows of light fittings suspended from the ceiling, allowing an easy installation and assembly.

### Design:

Aluminium profile carrier rails (TRS 2000/AL) Lengths: 2, 3 or 5 m. Series TRS 2000 additional covering strips (TRS A) 1 or 2 m.

### Mounting accessories:

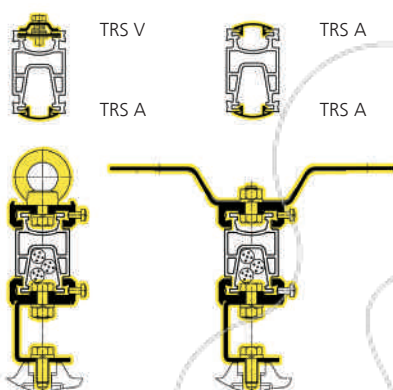
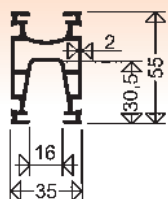
For each length of a light fitting only one suspension point is required.

Connection brackets (TRS V) - to be ordered separately - allows joining the individual rails up to any length wanted.

The carrier rails can either be mounted directly to the ceiling by means of the ceiling brackets (TRS ED/183A) or they can be suspended from the ceiling by means of the hook (TRS ER/183H) in combination with chain (KP40/K16V).

Perlon pendulums are not suitable for this purpose.

2 or 3 devices (TRS EL/183L) serve for mounting a light fitting to the rail. The suspension devices (TRS ED/183A) and (TRS ER/183H) as well as the device (TRS EL/183L) are movable in the longitudinal direction of the rails.



## TRS 2000...

aluminium carrier rails with high loading capacity for series e840..., e865...

### Schuch Quality - your advantage:

- Universal quick-action mounting system for explosion- and weather-proof light fittings
- easy to install (mount the suspension devices to the light fitting, then push the light fitting into the carrier rail profile)
- higher load capacity due to new profile design
- inserting the mains cable into the cable channel is possible
- a cover strip serves as a protection against dirt deposit

Article No.	Type	Product	Weight ca. [kg]
90260 0001	TRS 2000 2 M	Aluminium-rail 2 m long	3,0
90260 0002	TRS 2000 3 M	Aluminium-rail 3 m long	4,6
90260 0003	TRS 2000 5 M	Aluminium-rail 5 m long	7,6
90265 0005	TRSA 1	covering strip, 1 m long	0,4
90265 0006	TRSA 2	covering strip, 2 m long	0,7

## Mounting Devices

Article No.	Type	Product
90265 0004	TRS V	device (profile) for rail connection
90265 0008	TRS ED	ceiling bracket for mounting the rail
90022 0001	KP 40	chain 1 m long with 2 eyelets for fastening and length compensation
90265 0007	TRS ER	stainless steel ring nut for chain
90265 0009	TRS EL	stainless steel mounting bracket

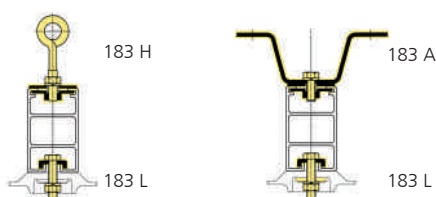
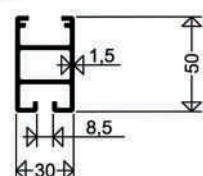
## AL...

aluminium carrier rails for series nD866...

Article No.	Type	Product	Weight ca. [kg]
90005 0001	2 M AL	Aluminium rail 2 m long	1,6
90005 0002	3 M AL	Aluminium rail 3 m long	2,4
90005 0003	5 M AL	Aluminium rail 5 m long	3,9

## Mounting Devices

Article -No.	Type	Product
90265 0004	TRS V	device for rail connection
90185 0001	183 A	ceiling bracket for ceiling mounting of the carrier rail
90022 0001	KP 40	chain 1 m long with 2 eyelets for fastening and length compensation
90049 0001	183 H	hook for chain pendulum
90050 0001	183 L	stainless steel mounting bracket



## Through wiring Systems for Explosion-Protected Light Fittings

For all fittings installed in a continuous row. Through wiring system with 2 multipole terminals which are fixed inside the light fitting.  
(Since retrofitting the through wiring system on site is subject to special regulations in regard to hazardous areas, we do recommend a factory-made through-wiring system.)

Through wiring systems:  
2.5mm<sup>2</sup> up to 16A  
4.0mm<sup>2</sup> up to 20A  
(depending on the permissible ambient temperature of the light fitting).

### Note:

With the "variable cable entries" most of our explosion-protected fluorescent fittings are well suited for **looping the cable at one end** of the fitting. This allows a perfect adaptation to the local conditions and moreover in many cases this spares the classic through-wiring system.

Please contact us for details in regard to explosion-protected fittings with looping system

## Factory-made through wiring system

Our explosion-protected light fittings of Zone 1/21 and Zone 2/22 with factory-made through wiring systems will be delivered with the standard through wiring system 5x2,5mm<sup>2</sup> PVC of 6x2,5mm<sup>2</sup> PVC (emergency fittings Zone1/21). Fittings with such standard through wiring do have separate part numbers (see price list).

### Example: Type e840..

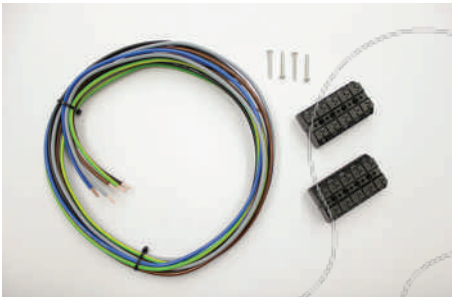
Article No.	Type	Through wiring system)
84005 0001	<b>e840 12L42</b>	without through wiring system)
84005 1001	<b>e840 12L42 DV</b>	with classical through wiring system 5 x 2.5mm <sup>2</sup> PVC

Through wiring systems for other cable cross sections (e.g. 4mm<sup>2</sup>) or number of poles (e.g. 3 x 2,5 mm<sup>2</sup>) are available on request.

## Through-wiring system for retrofit

Article No.	Type	
<b>for ex-proof LED-light fittings zone 1/21</b>		
11501 0019	<b>DV/NS ZO1/21 LED e865 e840</b>	5 x 2,5mm <sup>2</sup> PVC, for e840... and e865 12 ...
<b>for ex-proof LED-light fittings zone 2/22</b>		
11891 0014	<b>DV/NS Zo2/22 LED nD866</b>	5 x 2,5mm <sup>2</sup> PVC, nD866 12 ...

Through wiring retrofit sets for other series or other cable cross sections are also available.





## Explosion-Protected Wall Sockets System SolConeX Series 4216... - 4316...

### Applications:

Hazardous areas of zones 1, 21 and 2, 22

### Design:

Housing: Made from impact resistant plastic material with lock-up switch.  
System SolConeX

### Cable entry:

1 cable gland M25 x 1,5 and  
1 plug M25 x 1,5 (at bottom)  
(4216/...).

1 cable gland M32x1,5 and  
1 plug M32x1,5 (at bottom)  
(4316/...).

Type	Ident.-No.	Dimens./mm height/length	Width resp. Ø
4216/306	8570/11-306	232	105
4216/406	8570/11-406	248	115
4216/506	8570/11-506	248	115
4316/406	8571/11-406	281	135
4316/506	8571/11-506	281	135

**DB** Types 4216/306 and 4216/506 are standardized by Deutsche Bahn AG

## 4216/... / 4316/... or voltages up to 415 V



II 2G Ex db eb  
IIC T6, T5 Gb

II 2Ex tD A21 IP66  
T60°C/75°C/80°C

IP66



### EC-Type Examination Certificate:

PTB 03 ATEX 1227 (Ident.no. 8570)  
PTB 04 ATEX 1060 (Ident.no. 8571)

Ignition protection:  
e (increased safety)

### Marking:

II 2G Ex db eb IIC T6, T5 Gb  
II 2Ex tD A21 IP66 T60°C/75°C/80°C

Temperature class: T6

Permissible ambient temperature:

T5: -30°C bis +55°C

T6: -30°C bis +40°C

Article No.	Type	Rated-current	Voltage	Poles	Conn. terminals	Weight ca. [kg]
41060 0006	4216/306	16A	200-250V	2P + PE	up to 2 x 6,0 mm <sup>2</sup>	1,12
41060 0007	4216/406	16A	380-415V	3P + PE	up to 2 x 6,0 mm <sup>2</sup>	1,35
41060 0008	4216/506	16A	200-415V	3P + N + PE	up to 2 x 6,0 mm <sup>2</sup>	1,45
41060 0009	4316/406	32A	380-415V	3P + PE	up to 2 x 10,0 mm <sup>2</sup>	2,20
41060 0010	4316/506	32A	200-415V	3P + N + PE	up to 2 x 10,0 mm <sup>2</sup>	2,20



## Explosion-Protected Plugs System SolConeX Series 4210... - 4310...

### Applications:

Hazardous areas of zones 1, 21 and 2, 22.

### Design:

Housing: Made from impact resistant plastic material. System SolConeX

### Cable entry:

8 to 20 mm cable Ø (4210/...)

15 to 28 mm cable Ø (4310/...)

Type	Ident.-No.	Dimens./mm height/length	Width resp. Ø
4210/306	8570/12-306	176	76
4210/406	8570/12-406	176	89
4210/506	8570/12-506	176	92
4310/406	8571/12-406	204	99
4310/506	8571/12-506	204	102

Covering cap for plug available upon request.

**DB** Types 4210/306 and 4210/506 are standardized by Deutsche Bahn AG

## 4210/... / 4310/... for voltages up to 415V



II 2G Ex db eb  
IIC T6, T5 Gb

II 2Ex tD A21 IP66  
T60°C/75°C/80°C

IP66



### EC-Type Examination Certificate:

PTB 03 ATEX 1227 (Ident.no. 8570)  
PTB 04 ATEX 1060 (Ident.no. 8571)

Ignition protection: e (increased safety)

### Marking:

II 2G Ex db eb IIC T6, T5 Gb  
II 2Ex tD A21 IP66 T60°C/75°C/80°C

Temperature class: T5/T6

Permissible ambient temperature:

T5: -30°C bis +55°C

T6: -30°C bis +40°C

Article No.	Type	Rated current	Voltage	Pole	Conn. terminals	Weight ca. [kg]
41050 0006	4210/306	16A	200-250V	2P + PE	up to 2 x 6,0 mm <sup>2</sup>	0,38
41050 0007	4210/406	16A	380-415V	3P + PE	up to 2 x 6,0 mm <sup>2</sup>	0,39
41050 0008	4210/506	16A	200-415V	3P + N + PE	up to 2 x 6,0 mm <sup>2</sup>	0,50
41050 0009	4310/406	32A	380-415V	3P + PE	up to 2 x 6,0 mm <sup>2</sup>	0,51
41050 0010	4310/506	32A	200-415V	3P + N + PE	up to 2 x 6,0 mm <sup>2</sup>	0,60



## Explosion-Protected Coupler CES-System Series 4108...

### Applications:

Hazardous areas of Zones 1 and 2.

### Design:

Housing: Impact resistant plastic material.

Cable entry:

11 to 21mm cable Ø.

Type	Ident.-No.	Dimens./mm height/length	Width resp. Ø
4108/306	8575/14-306	215/280	70

## 4108/...

for voltages up to 250V



II 2 G Ex de IIC T6

IP54



EC-Type Examination Certificate:

PTB 01 ATEX 1044 (Ident.Nr. 8575)

Ignition protection:

e (increased safety)

Marking:

II 2 G Ex de IIC T6

Temperature class: T6

Permissible ambient temperature:

-30°C bis +45°C.

Article-No.	Type	Rated-current	Voltage	Pole	Conn. terminals	Weight ca. [kg]
41080 0001	<b>4108/306</b>	16A	200-250 V	2P + PE	4,0 mm²	0,77



## Explosion-Protected Installation Switches Series 8040...

### Applications:

For switching lighting installations in hazardous areas of Zones 1, 21 and 2, 22. Pay attention to the permissible switching capacities.

### Design:

**Housing and cover:** Made from impact resistant glass fibre reinforced polyester resin. Rotary handle fluorescent. 90° switching.

### Connection terminals:

stranded wire: 1,5 ... 2,5mm<sup>2</sup>.  
solid wire: 1,5 ... 4,0mm<sup>2</sup>

### Cable entry:

1 cable gland M25 x 1,5 and  
2 plugs M25 x 1,5 are part of the delivery.  
2nd cable gland upon request.  
**Mounting:** By means of 2 screws.

### Electrical Data

Rated Voltage 690V AC, 220V DC  
Switching capacities

AC-1	16A	690V
AC-15	16A	415V
AC-3	8A	500V
AC-3	4A	690V
DC-1	10A	24V
DC-1	6A	60V
DC-1	10A	110V <sup>1)</sup>
DC-1	10A	220V <sup>2)</sup>

Number of poles: 2-pole

1) 2 contacts connected in series  
2) 3 contacts connected in series

**8040/.**

for voltages up to 690 V



II 2 G Ex de IIC  
T6 Gb

II 2 D Ex tb IIIC  
T80°C Db

IP65



### EC-Type Examination Certificate:

PTB 01 ATEX 1105

### Marking:

II 2 G Ex de IIC T6 Gb  
II 2 D Ex tb IIIC T80° Db

### Ignition protection: e (increased safety)

Rated voltage: 690V AC, 220V DC

Rated current: max. 16A

Permissible ambient temperature:  
-20°C bis +40°C.

Article No.	Type	Switch version	Ident no.	Weight ca. [kg]
80300 0003	<b>8040/A</b>	ON-OFF 2 poles	8040/11-V30-33-B	0,60
80300 0004	<b>8040/W</b>	Pole changing switch	8040/11-V30-35-B	0,62

## Explosion-Protected Junction Box Series 8118...

### Applications:

For transmission and distribution of electrical energy in hazardous areas of Zones 1 and 2.

### Design:

**Housing:** Made from impact resistant glass fibre reinforced polyester resin.

**Connection terminals:** 5 hood-type terminals (1 of them serves for earth connection) for a max. conductor size of

2x6.0 mm<sup>2</sup>.

### Cable entry:

#### 8118/4:

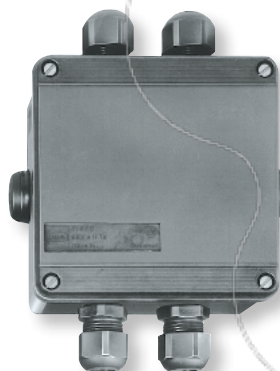
4 cable glands M25 x 1,5 +2 plugs M25 x 1,5.

#### 8118/6:

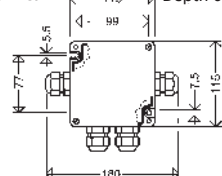
6 cable glands M25 x 1,5

### Mounting system:

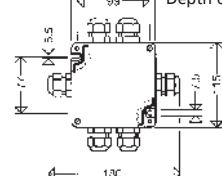
See dimensional drawings.



**8118/4** Depth 64mm



**8118/6** Depth 64mm



**8118/.**

voltages up to 750V



II 2 G Ex e IIC  
T5/T6 Gb

II 2 D Ex tb IIIC  
T80°C/T95°C Db

IP66



### EC-Type Examination Certificate:

PTB 99 ATEX 3103

### Marking:

II 2 G Ex e IIC T5/T6 Gb  
II 2 D Ex tb IIIC T80°C/T95°C Db

### Ignition protection: e (increased safety)

Rated voltage: 750V AC

### Permissible ambient temperature:

T6: -40°C bis +40°C  
T5: -40°C bis +55°C.

Rated current: max. 35A

Article No.	Type	Cable gland	Weight ca. [kg]
81180 0001	<b>8118/4</b>	4 x M25 x 1,5	0,57
81180 0002	<b>8118/6</b>	6 x M25 x 1,5	0,61



# Waterproof Light Fittings

## Quality knows no compromises

Waterproof light fittings have a wide scope of applications. Thus, a lighting system shall meet various requirements, from simple storage rooms to industrial applications with extreme ambient conditions and temperatures, mechanical and chemical impacts.

Requirements are as various as solutions which SCHUCH offers being an experienced specialist in this field. As a result, a very wide range of light fittings has been designed for special applications at workshops and in production areas.

Numerous excellent references in all industry branches witness SCHUCH's innovative strength, competence and reliability. Our customers appreciate the proverbial high quality of SCHUCH products for over 100 years.

Our customers can also rely on it with regard to all light fittings with the new LED technology. Quality knows no compromises.

### FROM WATERPROOF PORCELAIN LIGHT FITTINGS TO WATERPROOF LED LIGHT FITTINGS

#### 1895

Foundation of the company. Production of the first waterproof porcelain lamp holder for incandescent lamps. Production of first porcelain and hand light fittings with protective glass for damp locations, namely for breweries, leather and chemical industries.

#### 1949

Production of first waterproof light fittings without diffusers for fluorescent tubes.

#### 1952/53

Production of industry's first waterproof light fitting made of fiberglass-reinforced polyester. Launching own production of "PREPREG" and in-house production of fiberglass-reinforced polyester housings.

#### 1973

Start of production of legendary waterproof light fittings series 161/162, which, in sub-sequent years, developed to the waterproof light fitting for severe industrial applications.

#### 1975

Foamed polyurethane gasket is used for the first time instead of widespread conventional rubber seals.

#### 1995

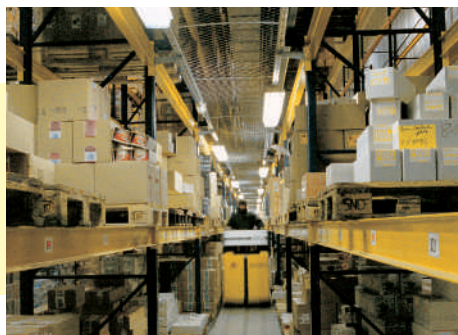
The range of waterproof light fittings extends by including special industry solutions for severe applications in the industry and at workshops.

#### 2006

Production of a waterproof light fitting according to IFS standard designed for food and beverage industries.

#### 2007

Industry's first waterproof light fitting for unprotected outdoor installation.



LED-TECHNOLOGY

**2007**  
Introduction of first waterproof LED light fittings (low power compact light fittings).

**2011**  
First waterproof LED light fitting series as highly efficient substitute for conventional fluorescent tube versions up to 2 x 58W.

**2014**  
With light fitting series 161 VARIO SCHUCH introduces industry's first waterproof light fitting with adjustable luminous flux. One light fitting can replace standard versions up to 2 x 58W.

**2015/16**  
First LED light fitting series for a wide temperature range of -40°C to

+65 °C, that is designed to be used in climatic zones with extreme temperature conditions and fluctuations.

**2016/17**  
Launch of LUXANO Basic with innovative DOB (driver on board).

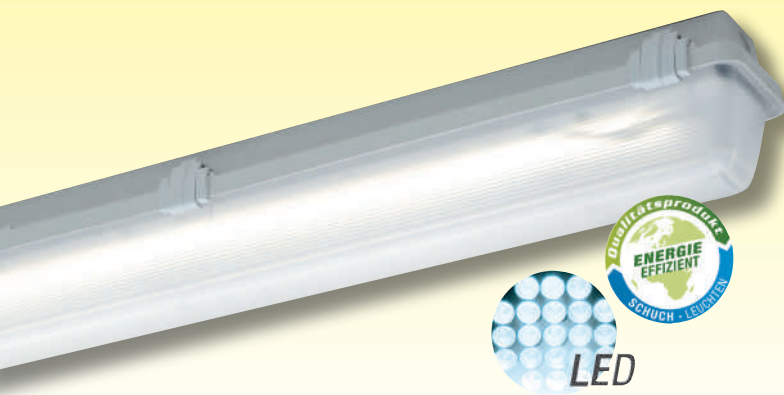
**2018**  
With the PRIMO, a gas-tight light fitting is added to the SCHUCH portfolio. These light fittings are suitable for all areas with harmful gas load, as well as for stables with ammonia concentration (version LW).



Dustproof/Waterproof Light Fittings  
LED-Technology

Product	Series	Page
<b>Light Fittings with diffuser</b>		
<b>Series 161/162...</b>	<b>161/162...</b>	<b>40-47</b>
• with DALI interface	... DIMD	41
• dimmable via „Corridor Mode“	... DIMC	41
• with integrated motion detector	... SENS	42
• with narrow-wide optics	... T/TB	42
• for high ambient temperatures	... H50	42
• for low ambient temperatures	... T40	43
• for wide temperature ranges	... T40/H	43
• for outdoor installation	... AUS	43
• for food industry areas	... LM	44-45
• variable setting of the luminous flux	... VARIO	46-47
<b>Series 144...</b>	<b>144...</b>	<b>48-49</b>
<i>Extremely robust Central Locking System</i>		
<b>Series 163/164... Generation 2</b>	<b>163/164... G2</b>	<b>50-53</b>
• with DALI interface	... DIMD	51
• dimmable via „Corridor Mode“	... DIMC	51
• with integrated motion detector	... SENS	52
• for food industry areas	... IFS	52
<b>Series LUXANO BASIC</b>	<b>167...</b>	<b>54</b>
<b>Series 164KL... Generation 2</b>	<b>164KL... G2</b>	<b>55</b>
<i>small polyester light fittings</i>		
<b>Series 130/131...</b>	<b>130/131...</b>	<b>56</b>
<i>small PC light fittings</i>		
<b>Oval-shaped light fittings</b>		
<b>Series 3610...</b>	<b>3610...</b>	<b>57</b>
<b>Compact LED Fitting</b>		
<b>Series 3611...</b>	<b>3611...</b>	<b>58</b>
<b>Tubular Light Fittings</b>		
<b>PRIMO</b>	<b>107...</b>	<b>59-60</b>
<i>gas-tight profile tube light fitting</i>		
• for polluted environments	107... HR	59
• for ammonia contaminated animal houses in agriculture	107... LW	60
<b>TUBEO</b>	<b>110...</b>	<b>61-62</b>
<i>dust- and pressure water-tight tube light fitting</i>		
• for high ambient temperatures	110... H50	62
<b>Sheet Steel Light Fittings</b>		
<b>Series 190...</b>	<b>190...</b>	<b>63-66</b>
<i>compact light fittings</i>		
<b>Series 191/192...</b>	<b>191/192...</b>	<b>64</b>
<i>low profile light fittings</i>		
<b>Series 181/182...</b>	<b>181/182...</b>	<b>64</b>
<i>steep roof light fittings</i>		
<b>Series 187/188...</b>	<b>187/188...</b>	<b>65</b>
<i>for rooms with high exposure to dust</i>		
<b>Vandal Proof Light Fittings</b>		
<b>Series 140...</b>	<b>140...</b>	<b>67</b>
<b>Carrier Rails</b>		
	TRS 2000	68
	AL	68
	TRS 1000	69
<b>Through Wirings</b>		
	DV	69

Dustproof/Waterproof  
Light Fittings



## Dustproof/Waterproof LED Light Fitting with Diffuser Series 161/162.. L..

### Application:

In humid, wet and dusty indoor areas of industrial and agricultural premises, for workshops and car parks, cold stores, low temperature stores, cooling and freezing chambers and walkable low temperature cabins in hotels, climate chambers, hard to reach areas with high downtime and maintenance costs when replacing the lamps.

(In case of aggressive atmosphere please consult us)

### Design:

**Housing:** Glass fibre reinforced polyester resin, silicone gasket.

**Diffuser:** Injected, acrylic glass, frosted for glare limitation.

**Closure:** Three-part captive plastic clips (KK), incl. 2 safety clips (KKS) to ensure protection against contact.

**Reflector:** Aluminium, painted, can be suspended or removed and carries the electrical components.

**Connection:** 3-pole or 5-pole terminal (DIMD).

**Cable entries:** 2 plugs M20.

**Mounting:** Closed knock-outs for direct ceiling mounting (to be opened at site). Sealing and pressure disks inside each fitting.

### Technical data:

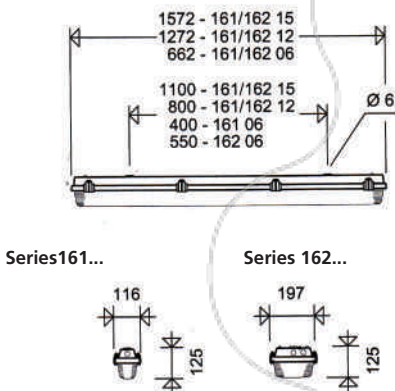
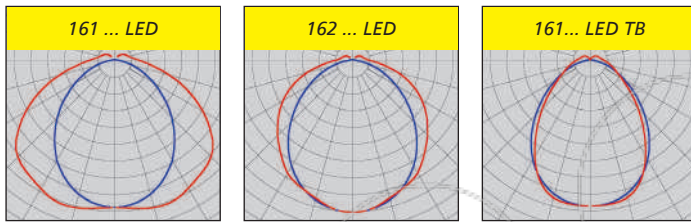
**LED:** Linear modules 4,000K, CRI > 80, L<sub>80</sub> > 50,000h at max. ambient temperature

**ECG:** 220-240V, 50/60HZ, overload and short-circuit protection

**Ambient temperature:** -20°C (-40°C for types ...T40) up to ..°C see product table

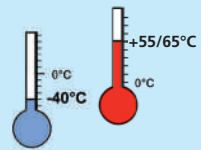
### Options:

- 6 500K
- high colour rendering index R<sub>a</sub>>90 (light colour 940)
- according to „International Featured Standard Food“ (IFS Food)
- for connection to central power supply unit (ZB)
- PC-diffuser, frosted (PC)
- stainless steel clips (KE)



### SCHUCH quality - Your advantage:

- highest efficiency with luminous efficacy up to 167lm/W
- homogeneous illumination by using frosted diffusers, no particular light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- with "D"-sign, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- special versions for high ambient temperatures up to +50°C, low temperatures down to -40°C and wide temperature range from -40°C up to +65°C, for outdoor installations and for applications in the food industry.
- lower maintenance and downtime costs due to long maintenance intervals
- ECG and reflector with LED-modules can be replaced by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)



Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 161/162...



### optimized for energy consumption (1 : 1 substitute for fluorescent types)

16117 0309	<b>161 06L12</b>	1	10	1.360	136	40	A++	1 x 18W	1,8
16117 0301	<b>161 12L22</b>	1	16	2.670	167	40	A++	1 x 36W	2,7
16117 0303	<b>161 15L34</b>	1	20	3.340	167	40	A++	1 x 58W	3,0
16117 0310	<b>161 06L20</b>	1	15	2.040	136	40	A++	2 x 18W	1,8
16117 0302	<b>161 12L42</b>	1	31	4.540	146	40	A++	2 x 36W	2,7
16117 0304	<b>161 15L60</b>	1	42	6.290	150	40	A++	2 x 58W	3,0

### with high luminous flux

16117 0305	<b>161 12L60</b>	1	43	6.360	148	30	A++	2 x 58W	2,7
16117 0306	<b>161 15L75</b>	1	54	8.060	149	30	A++	> 2 x 58W	3,0
16215 0302	<b>162 12L120</b>	2	86	12.450	145	35	A++	2 x 80 bzw. 3 x 58W	4,3
16215 0303	<b>162 15L150</b>	2	106	15.760	149	35	A++	4 x 58W	4,8

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes

### Notes:

Maximum energy saving by using types which are optimized for energy consumption.

### Notes:

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 161/162... DIMD



### dimmable via DALI interface

#### Design:

Same as standard version, but with DALI-ECG and 2 additional clamping points, marked with DA,

Dimming level 1 -100%.

#### Note:

The conducting wires to the control input must be mains voltage stable

and can be integrated in the connection cable.

16117 0319	<b>161 06L12 DIMD</b>	1	11	1.360	124	40	A++	1 x 18W	1,9
16117 0311	<b>161 12L22 DIMD</b>	1	17	2.670	157	40	A++	1 x 36W	2,8
16117 0313	<b>161 15L34 DIMD</b>	1	21	3.340	159	40	A++	1 x 58W	3,1
16117 0320	<b>161 06L20 DIMD</b>	1	16	2.040	128	40	A++	2 x 18W	1,9
16117 0312	<b>161 12L42 DIMD</b>	1	32	4.540	142	40	A++	2 x 36W	2,8
16117 0314	<b>161 15L60 DIMD</b>	1	43	6.290	146	40	A++	2 x 58W	3,1
16117 0315	<b>161 12L60 DIMD</b>	1	44	6.360	145	30	A++	2 x 58W	2,7
16117 0316	<b>161 15L75 DIMD</b>	1	55	8.060	147	30	A++	> 2 x 58W	3,1
16215 0312	<b>162 12L120 DIMD</b>	2	88	12.450	141	35	A++	2 x 80 bzw. 3 x 58W	4,4
16215 0313	<b>162 15L150 DIMD</b>	2	109	15.760	145	35	A++	4 x 58W	4,9

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

## 161... DIMC



### dimmable via „Corridor Mode“

#### Application:

Areas where light fittings are controlled via motion detector or door contact, e.g. storage areas, shelf aisles. Areas with high energy-saving potential at times without public

access, e.g. car parks. Areas in which a 24-hour illumination is required.

#### Design:

Same as standard version, but with dimmable ECG and additional clamping point, marked with L'.

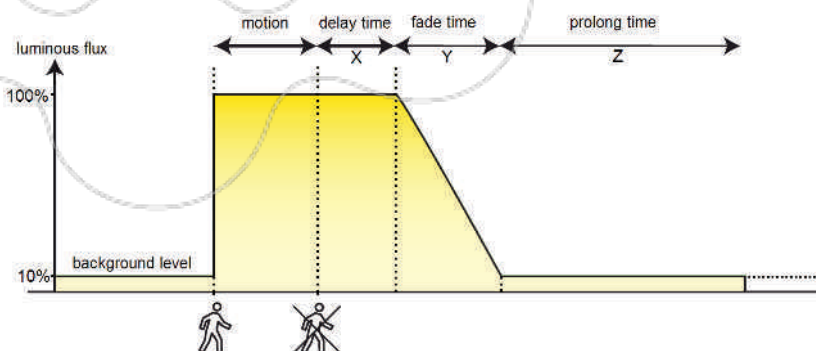
#### Note:

Such light fitting can be controlled by a light fitting of type 161 ... L' ..SENS.

#### Technical data:

The corridor function allows easy power reduction at a fixed value by means of an ordinary 230V control voltage. Default settings:

- 100% luminous flux as long as the control phase is active.
- Holding time of 100% luminous flux after switching off the control phase = 0 seconds. By setting the switch-off delay of the motion detector the customer can select an individual holding time
- Dimming ramp 30 seconds
- 10% luminous flux when no movement is detected (reduced operation). For some versions the minimum dimming level may be higher due to technical limitations.
- Automatic cutoff deactivated (light fitting never switches off, but can be switched off by user at any time) Automatic cutoff is not available for some types



#### Note:

Since the switching capabilities of LED modules and control devices are limited, dimming without switching of the light fitting completely will result in a much longer life of the light fitting.

16117 0420	<b>161 12L22 DIMC</b>	1	17	2.670	157	40	A++	1 x 36W	2,8
16117 0422	<b>161 15L34 DIMC</b>	1	21	3.340	159	40	A++	1 x 58W	3,1
16117 0421	<b>161 12L42 DIMC</b>	1	32	4.540	142	40	A++	2 x 36W	2,8
16117 0423	<b>161 15L60 DIMC</b>	1	43	6.290	146	40	A++	2 x 58W	3,1

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 161... SENS



### DIMC version with integrated motion detector

#### Application:

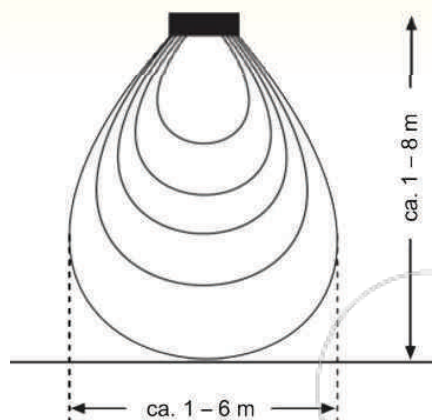
Areas with high energy-saving potential in times without public access. Areas in which a 24-hour illumination is required.

#### Design:

Same as standard version, but with dimmable ECG, integrated motion detector and additional clamping point, marked with L'. This light

fitting (Master) controls all fittings of type 161... DIMC (Slaves), which are connected to the same circuit.

Detection range of sensor



#### Technical data:

**Detection range of sensor:** Adjustable from 1 m - 6 m (depending on the environment); Default: Maximum  
 – Objects (partition walls made from steel, concrete beams, etc.) which absorb or reflect the radar waves affect the detection range of the sensor. This must be checked and taken into account in the planning  
 – In general, the detection of radial movements (towards the HF sensor) is more reliable than the detection of tangential movements.

– Tangential movements in a circular path are partially not detected.

– Detection range max. 4m at light point heights of about 2.30m

– Detection range max. 6m at light point heights up to max. 8m.

**Delay time:** Adjustable from 10 sec to 30 min; with Infrared remote control to 60 min; Default: 5 min

**Daylight control:** Adjustable from 2 Lux; Default: Maximum

**Ambient temperature:** -20 °C up to see article table

#### Factory settings:

- Dimming ramp 30 seconds

- 10% luminous flux when no movement is detected (reduced operation). For some versions the minimum dimming level may be higher due to technical limitations.

- Automatic cutoff deactivated (light fitting never switches off, but can be switched off by user at any time)

- Automatic cutoff is not available for some types

#### Parameter setting:

- Potentiometer on the HF sensor

- Infrared remote control (optional)

16117 0697	<b>161 12L22 SENS</b>	1	19	2.670	141	40	A++	1 x 36W	2,9
16117 0699	<b>161 15L34 SENS</b>	1	23	3.340	145	40	A++	1 x 58W	3,2
16117 0698	<b>161 12L42 SENS</b>	1	34	4.540	134	40	A++	2 x 36W	2,9
16117 0700	<b>161 15L60 SENS</b>	1	45	6.290	140	40	A++	2 x 58W	3,2

## 161/162... T/TB



### narrow beam, optics with 40° angle (T)

### narrow-wide beam, optics with 60° angle (TB)

#### Application:

Illumination for workplaces, aisles, etc.

#### Design:

Same as standard versions  
 161/162... LED, but with narrow

beam optics with 40° (T) beam angle or with narrow-wide beam optics with 60° (TB) beam angle.

16117 0608	<b>161 15L60T</b>	1	40	6.410	160	40	A++	2 x 58W	3,2
16215 0605	<b>162 15L120T</b>	2	80	12.710	159	40	A++	2 x 80 bzw. 3 x 58W	5,4
16117 0604	<b>161 15L60TB</b>	1	40	6.390	160	40	A++	2 x 58W	3,2
16215 0601	<b>162 15L120TB</b>	2	80	12.670	158	40	A++	2 x 80 bzw. 3 x 58W	5,4

## 161/162... H50

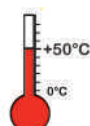


### for high ambient temperatures up to +50°C

16117 0324	<b>161 06L12 H50</b>	1	10	1.360	136	50	A++	1 x 18W	2,0
16117 0334	<b>161 06L12 H50 DIMD</b>	1	11	1.360	124	50	A++	1 x 18W	2,0
16117 0321	<b>161 12L22 H50</b>	1	16	2.670	167	50	A++	1 x 36W	2,7
16117 0331	<b>161 12L22 H50 DIMD</b>	1	17	2.670	157	50	A++	1 x 36W	2,8
16117 0322	<b>161 15L34 H50</b>	1	20	3.340	167	50	A++	1 x 58W	3,0
16117 0332	<b>161 15L34 H50 DIMD</b>	1	21	3.340	159	50	A++	1 x 58W	3,1
16215 0324	<b>162 06L20 H50</b>	1	17	2.520	148	50	A++	2 x 18W	2,5
16215 0334	<b>162 06L20 H50 DIMD</b>	1	18	2.520	140	50	A++	2 x 18W	2,6
16215 0321	<b>162 12L42 H50</b>	1	27	4.250	157	50	A++	2 x 36W	4,3
16215 0331	<b>162 12L42 H50 DIMD</b>	1	28	4.250	152	50	A++	2 x 36W	4,4
16215 0322	<b>162 15L60 H50</b>	1	37	6.000	162	50	A++	2 x 58W	4,8
16215 0332	<b>162 15L60 H50 DIMD</b>	1	38	6.000	158	50	A++	2 x 58W	4,9

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

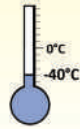


Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max.[°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 161... T40



for ambient temperatures down to -40°C

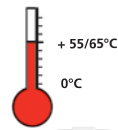


16117 0409	<b>161 06L12 T40</b>	1	11	1.610	146	40	A++	1 x 18W	1,8
16117 0401	<b>161 12L22 T40</b>	1	20	3.230	162	40	A++	1 x 36W	2,7
16117 0403	<b>161 15L34 T40</b>	1	25	4.050	162	40	A++	1 x 58W	3,0
16117 0410	<b>161 06L20 T40</b>	1	18	2.560	142	40	A++	2 x 18W	1,8
16117 0402	<b>161 12L42 T40</b>	1	34	5.090	150	40	A++	2 x 36W	2,7
16117 0404	<b>161 15L60 T40</b>	1	42	6.360	151	40	A++	2 x 58W	3,0

## 161... T40 / H...



for wide temperature ranges from -40° to see product table



16117 0509	<b>161 06L12 T40 H65</b>	1	11	1.610	146	65	A++	1 x 18W	1,8
16117 0501	<b>161 12L22 T40 H65</b>	1	20	3.230	162	65	A++	1 x 36W	2,7
16117 0503	<b>161 15L34 T40 H65</b>	1	25	4.050	162	65	A++	1 x 58W	3,0
16117 0510	<b>161 06L20 T40 H55</b>	1	18	2.560	142	55	A++	2 x 18W	1,8
16117 0502	<b>161 12L42 T40 H55</b>	1	34	5.090	150	55	A++	2 x 36W	2,7
16117 0504	<b>161 15L60 T40 H55</b>	1	42	6.360	151	55	A++	2 x 58W	3,0

## 161/162... AUS



for applications in unprotected outdoor areas

### Application:

In protected and unprotected outdoor areas and industrial plants, mounted to walls, ceilings, catwalks and steel structures, pipe brackets, grating, under canopies, bus stops, train stations, subways, construction sites, etc.

### Design:

As type 161/162... LED, but:

Diffuser: UV proof

Pressure compensation element:

M20

Entries: 1 gland M20 at one small side, pressure compensation element M20 at the other small side.

### Mounting:

Ceiling and horizontal wall mount or mounting to outreaches, poles, steel structures, catwalks, etc. by means of pipe clamps. For vertical mounting please consult us.

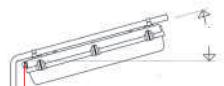
### Notes:

The light fitting is not to be used in areas with high mechanical stress (wind) or seldom usage (i.e. maintenance and inspection only). We recommend our series 144... in AUS-version or a weather roof within very critical environmental conditions. When mounting the light fittings on bracket poles or tubular beams/pipes always use original SCHUCH pipe clamps with support (see accessories).

### pole mount with pipe clamps



pressure compensation element



pressure compensation element

optimized for energy consumption (1 : 1 substitute for fluorescent types)

16117 0351	<b>161 12L22 AUS</b>	1	16	2.670	167	40	A++	1 x 36W	2,7
16117 0353	<b>161 15L34 AUS</b>	1	20	3.340	167	40	A++	1 x 58W	3,0
16117 0352	<b>161 12L42 AUS</b>	1	31	4.540	146	40	A++	2 x 36W	2,7
16117 0354	<b>161 15L60 AUS</b>	1	42	6.290	150	40	A++	2 x 58W	3,0

with high luminous flux

16117 0355	<b>161 12L60 AUS</b>	1	43	6.360	148	30	A++	2 x 58W	2,7
16117 0356	<b>161 15L75 AUS</b>	1	54	8.060	149	30	A++	> 2 x 58W	3,0
16215 0352	<b>162 12L120 AUS</b>	2	86	12.450	145	35	A++	2 x 80 bzw. 3 x 58W	4,3
16215 0353	<b>162 15L150 AUS</b>	2	106	15.760	149	35	A++	4 x 58W	4,8

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

### Advantages of the AUS design:

- glass fibre reinforced polyester housing, durable resistant against UV-radiation and chemical components.
- our injected PMMA-covers are extremely UV-resistant and robust (wall thickness 1.9mm)
- EPDM profile gaskets are UV-, ozone-, weather-, chemically resistant and non-aging
- pressure compensation element provides controlled venting and thus protects against condensation
- the fitting can be installed in canopied as well as in entirely open outdoor areas



Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 161/162... LM



### for applications in food areas

#### Application:

Food industry or food processing factories especially in risky areas of the food production or processing, suppliers to the food industry who are falling in the IFS, BRC or HACCP standards or who are subject to comparably strict

requirements (e.g. production of food packaging).

#### Design:

Same as type 161/162... LED but:  
Diffuser: Shatterproof, high chemical resistance, elements for glare limitation mounted to the reflector.

Closure clips: Stainless steel (KE), incl. 2 safety clips (KE5) to ensure protection against contact.

#### Advantages of the LM version:

- shatterproof diffuser with very high impact resistance (16Nm!) even at a high continuous operating temperature
- resistant to grease and aggressive cleaning agents, disinfectants and solvents (we recommend the respective cleaning agents and disinfectants to be tested on their resistance (resistance index on request).

#### IFS/BRC/VDMA/HACCP

SCHUCH Light Fittings designed for food and beverage industry applications are in accordance with IFS/BRC/VDMA standards. They can be operated without restrictions in operations that must fulfill the HACCP Concept.

#### optimized for energy consumption (1 : 1 substitute for fluorescent types)

16119 0005	<b>161 06L12 LM</b>	1	10	1.330	133	40	A++	1 x 18W	1,8
16119 0001	<b>161 12L22 LM</b>	1	16	2.350	147	40	A++	1 x 36W	2,7
16119 0002	<b>161 15L34 LM</b>	1	23	3.460	150	40	A++	1 x 58W	3,0
16119 0006	<b>161 06L20 LM</b>	1	16	2.180	136	40	A++	2 x 18W	1,8
16119 0003	<b>161 12L42 LM</b>	1	31	4.500	145	40	A++	2 x 36W	2,7
16119 0004	<b>161 15L60 LM</b>	1	45	6.260	139	35	A++	2 x 58W	3,2

#### with high luminous flux

16219 0001	<b>162 12L85 LM</b>	2	60	8.460	141	40	A++	2 x 54W	4,3
16219 0002	<b>162 15L100 LM</b>	2	74	10.650	144	40	A++	2 x 80W	4,8
16219 0006	<b>162 12L120 LM</b>	2	88	12.900	147	35	A++	2 x 80 bzw. 3 x 58W	4,3
16219 0007	<b>162 15L150 LM</b>	2	109	15.740	144	35	A++	4 x 58W	4,8

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!



#### Note:

The colour rendering index Ra does not incorporate the remaining part (R9) in the light spectrum. The standard light colour 840 has only a minor R9 value. For meat processing factories, we recommend the use of our light fittings with light colour 940 (special version), which emits a bigger amount of red light.

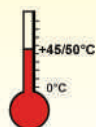


Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 161/162... LM H..



for high ambient temperatures up to +45/50°C

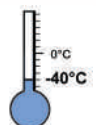


16119 0051	161 12L22 LM H50	1	16	2.350	147	50	A++	1 x 36W	2,8
16119 0052	161 15L34 LM H50	1	23	3.460	150	50	A++	1 x 58W	3,0
16219 0051	162 12L42 LM H50	1	29	4.540	157	50	A++	2 x 36W	4,3
16219 0052	162 15L60 LM H45	1	42	6.520	155	45	A++	2 x 58W	4,8

## 161/162... LM T40



for ambient temperatures down to -40°C



16119 0101	161 12L22 LM T40	1	15	2.360	157	40	A++	1 x 36W	2,7
16119 0102	161 15L34 LM T40	1	26	4.140	159	40	A++	1 x 58W	3,2
16119 0103	161 12L42 LM T40	1	31	4.770	154	40	A++	2 x 36W	2,7
16119 0104	161 15L60 LM T40	1	44	6.570	149	35	A++	2 x 58W	3,2

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

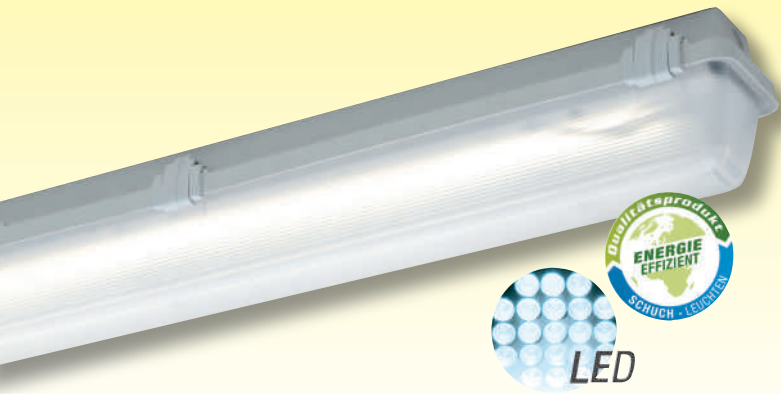
\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

## Accessories / Spare Parts

Article no.	Type		Article no.	Type	
spare glasses, PMMA frosted			spare glasses, PC frosted		
16111 9035	161 018 F	for 161 06..	16111 9036	161 018 FPC	for 161 06..
16111 9031	161 036 F	for 161 12..	16111 9033	161 036 FPC	for 161 12..
16111 9032	161 058 F	for 161 15..	16111 9034	161 058 FPC	for 161 15..
16211 9035	162 018 F	for 162 06..	16211 9030	162 018 FPC	for 162 06..
16211 9031	162 036 F	for 162 12..	16211 9033	162 036 FPC	for 162 12..
16211 9032	162 058 F	for 162 15..	16211 9034	162 058 FPC	for 162 15..
spare glasses LM-version 161...			spare glasses LM-version 162...		
16111 9017	161 018 LM	for 161 06..			
16111 9018	161 036 LM	for 161 12..	16211 9018	162 036 LM	for 162 12..
16111 9019	161 058 LM	for 161 15..	16211 9019	162 058 LM	for 162 15..
Wire guards, powder coated					
90004 0001	SK 120	for 161 06..	90004 0004	SK 220	for 162 06..
90004 0002	SK 140	for 161 12..	90004 0005	SK 240	for 162 12..
90004 0003	SK 165	for 161 15..	90004 0006	SK 265	for 162 15..
Fasteners					
90053 9003	KK/KKS VE10	plastic, incl. 2 safety clips (packing unit 10 pcs.)			
90055 9004	KE/KES VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.)			
90053 9004	KKS P	1 pair of safety clips (for LED version), plastic			
90055 9005	KES P	1 pair of safety clips (for LED version), stainless steel			
Cable entries					
90063 9000	2511	blanking plug M20			
25610 9000	2561	plastic cable gland M20 x 1,5			
25600 9000	2560	plastic cable gland M25 x 1,5			
90259 9002	DAE20	pressure compensation element M20			
90259 9003	DAE 20/25	adapter gland M20 -> M25 with pressure compensation			
Pipe clamps					
90093 0002	183 RO 112 A P	2 pcs., 1 1/2" stainless steel, with support			
90094 0002	183 RO 2 A P	2 pcs., 2" stainless steel, with support			
Consider mounting distances when installing the light fittings by pipe clamps to pole outreaches or any brackets.					
Angle brackets, aluminium					
90045 9001	HW 30 P	pair of angle brackets 30°			
90045 9002	HW 45 P	pair of angle brackets 45°			
90045 9004	HW 60 P	pair of angle brackets 60°			
90045 9003	HW 90 P	pair of angle brackets 90°			
Accessories for ceiling mounting					
90049 0002	183 S	hook for chain suspension			
90095 0001	183 DS	stainless steel bracket with bolt M5			
Infrared remote control for SENS-light fittings					
90295 9000	FB SENSOTEC-Mini	Infrared remote control for 161 ..L.. SENS			

Dustproof/Waterproof  
Light Fittings

Dustproof/Waterproof LED Light Fitting with Diffuser with variable setting of the luminous flux Series 161... VARIO



Application:

Areas, where one standardised LED-light fitting shall be used for different illumination tasks. In humid, wet and dusty indoor areas of industrial and agricultural premises, for workshops and car parks, cold stores, low temperature stores, cooling and freezing chambers and walkable low temperature cabins in hotels, climate chambers, hard to reach areas with high downtime and maintenance costs when replacing the lamps. Aggressive atmospheres: Please consult us.

Design:

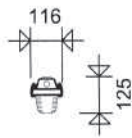
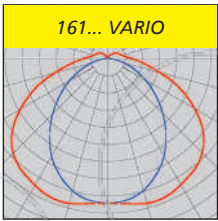
**Housing:** Glass fibre reinforced polyester resin, silicone gasket.  
**Diffuser:** Injected, acrylic glass, frosted for glare limitation.  
**Closure:** Three-part captive plastic clips (KK), incl. 2 safety clips (KKS) to ensure protection against contact.  
**Reflector:** Aluminium, painted can be suspended and carries the electrical components.  
**Connection:** 3-pole terminal  
**Cable entries:** 2 plugs M20.  
**Mounting:** Closed knock-outs for direct ceiling mounting (to be opened on site). Sealing and pressure disks inside each fitting.

Technical data:

**LED:** Line modules 4,000K, CRI > 80, L<sub>80</sub> > 50,000h at max. ambient temperature. (see notes)  
**ECG:** 220-240V, 50/60Hz, overload and short-circuit protection  
**DIP switch for setting the luminous flux of the luminaire.**  
**Ambient temperature:** -20°C up to +30/35/40/45°C (see type table)

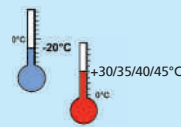
Options:

- 6.500K
- for outdoor installation (AUS)
- PC-diffuser frosted (FPC)



SCHUCH quality - Your advantage:

- universally usable due to variable setting of the luminous flux, depending on the requirement (replaces fluorescent lamps from 1x36W up to 2x58W)
- quick and easy adjustment on-site
- can be changed at any time (e.g. change of use of the premises with new requirements in regard to the level of illumination)
- highest efficiency with luminous efficacy up to 159lm/W
- homogeneous illumination by using frosted diffusers, no particular light points visible, comfortable perception of light, brilliant glare limitation
- high colour reproduction CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- with „D“-sign, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- for temperatures from -20°C up to +30/35/40/45°C (depending on setting)
- economical storage due to standardisation (only one light fitting instead of multiple versions)
- lower maintenance and downtime costs due to long maintenance intervals
- ECG and Reflector with LED-modules replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard



161... VARIO



The luminous flux is variably adjustable to almost every value between 2.390lm and 5.880lm. Power consumption and

admissible ambient temperature will change depending on the setting of the luminous flux.

Article No.	Type	Power consumption [W] **	Luminous flux [lm] 1)**	Luminous efficacy [lm/W]**	Amb. temp. max. [°C]	Energy efficiency class	Substitute for ca. *	(without packing material)
16117 0399	161 12L VARIO	15	2.390	159	45	A++	1 x 36W	2,7
		23	3.600 <sup>2)</sup>	157	45	A++	1 x 58W	
		30	4.570	152	40	A++	2 x 36W	
		40	5.880	147	35	A++	2 x 58W	

1) Examples of possible settings  
2) Factory setting

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.  
\*\* see notes

Notes:

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## 161... VARIO LM



### for application in food industry areas

#### Application:

Food industry or food processing factories especially in risky areas of the food production or processing, suppliers to the food industry who are falling in the IFS standards or who are subject to comparably strict requirements (e.g. production of food packaging).

Same as type 161 12... VARIO but:

**Diffuser:** Shatterproof, high chemical resistance, cover for glare limitation fixed to reflector.

**Closure clips:** Stainless steel (KE), incl. 2 safety clips (KES) to ensure protection against contact. The luminous flux is variably adjustable to almost every value between 2.300lm and 5.650lm.

ambient temperature will change depending on the setting of the luminous flux.

#### Design:

Power consumption and admissible

Article No.	Type	Power consumption [W] **	Luminous flux [lm] 1)**	Luminous efficacy [lm/W]**	Amb. temp. max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] (without packing material)
16119 0399	161 12L VARIO LM	15	2.300	153	40	A++	1 x 36W	2,7
		23	3.460 <sup>2)</sup>	150	40	A++	1 x 58W	
		30	4.390	146	35	A++	2 x 36W	
		40	5.650	141	30	A++	2 x 58W	

1) Examples of possible settings

2) Factory setting

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes

#### Advantages of the LM version:

- shatterproof diffuser with very high impact resistance (16Nm!) even at a high continuous operating temperature
- resistant to grease and aggressive cleaning agents, disinfectants and solvents (we recommend the respective cleaning agents and disinfectants to be tested on their resistance (resistance index on request.)

#### IFS/BRC/VDMA/HACCP

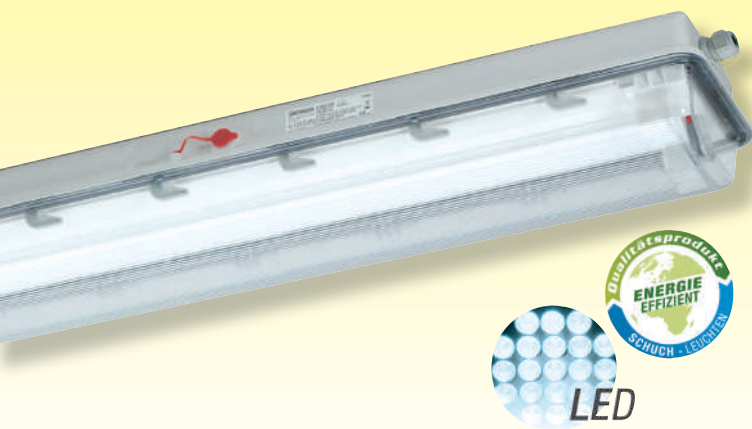
SCHUCH Light Fittings designed for food and beverage industry applications are in accordance with IFS/BRC/VDMA standards. They can be operated without restrictions in operations that must fulfill the HACCP Concept.

Dustproof/Waterproof  
Light Fittings

## Accessories / Spare Parts

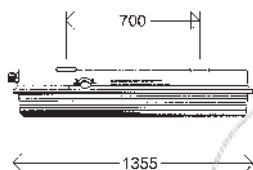
Article No.	Type	
<b>Spare diffuser</b>		
16111 9031	161 036 F	PMMA, frosted
16111 9033	161 036 FPC	PC, frosted
16111 9018	161 036 LM	LM, clear

Additional accessories see series 161/162 ...

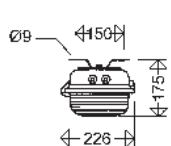


#### Note:

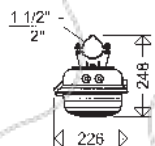
In unprotected outdoor areas a gland with pressure compensation must be used to avoid formation of condensation (see options)



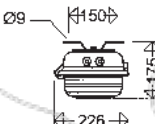
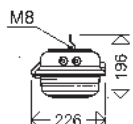
Pipe clamp mounting



Suspension eyes H8V



Ceiling brackets 15A



#### Looping the cable on one side:

All light fittings of series 144... have got 2 cable entries on one small side of the housing for cable looping instead of the through wiring system. This allowing a more economical cable looping at one end instead of the classical through wiring system (surcharge for 5-pole version).

#### Notes:

**Properties, limitations and details for controlling LED-light fittings:**

**See "Technical Supplement"**

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## Extremely robust Dustproof/Waterproof LED-Light Fitting with Central Locking System Series 144 ...

#### Application:

Indoor and protected or unprotected outdoor areas with high mechanical strains as well as areas where any external clips are not wanted or where such clips could create problems. Hard to reach areas and areas with high downtime and maintenance cost when replacing the lamps, Food industry and food processing industry. (Aggressive atmospheres: Please consult us).

#### Design:

**Housing:** Glass fibre reinforced polyester resin.

**Diffuser:** Polycarbonate, clear with internal prisms, hinged.

**Gasket:** Silicone.

**Reflector:** Aluminium painted, hinged and removable. Elements for glare limitation mounted to the reflector.

**Central locking system:** Operated by a hexagonal socket key 13mm.

**Connection:** 3-pole terminal.

**Cable entries:** 3 entries

M25 x 1,5 (2 glands and 2 screw plugs). Looping the mains cable at one end of the housing up to 3 x 2,5mm<sup>2</sup> possible.

**Mechanical installation:** 2 suspension eyes with bolts (H8V P) or 2 ceiling brackets (15A P), see accessories.

#### Technical data:

**LED:** Linear modules 4,000K, CRI > 80, L<sub>80</sub> > 50,000h at max. ambient temperature

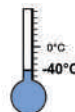
**ECG:** 220-240V, 50/60HZ, overload and short-circuit protection

**Ambient temperature:** -20°C up to see product table

#### Options:

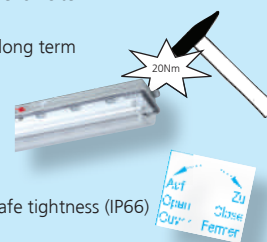
- 6.500K
- dimmable version with DALI interface (DIMD)
- dimmable via „Corridor Mode“ (DIMC)
- integrated motion detector (SENS)
- adapter gland with pressure compensation suitable for unprotected outdoor application (AUS)

- with through wiring up to 6 x 2,5 sqmm
- for low ambient temperatures
- for connection to group or central battery systems (ZB)
- emergency light version with self-contained battery



#### Schuch Quality - your advantage:

- highest efficiency with luminous efficacy up to 147lm/W
- homogeneous illumination by using elements for glare limitation, no particular light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- with "D"-sign, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- lower maintenance and downtime costs due to long maintenance intervals
- ECG and reflector with LED-modules can be replaced by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- extremely sturdy design of high mechanical and chemical resistance for a long term use in rough industrial areas:
  - housing of an impact resistance
  - polycarbonate diffuser of high impact strength (equal wall thickness: 2.5mm)
  - robust internal central locking system
  - highly resistant silicone gasket of dimensional stability for permanently safe tightness (IP66)
- easy to install and maintain:
  - time saving easy mechanical installation by means of eye bolts or ceiling brackets without opening the light fitting
  - time saving central locking system and hinged diffuser
- best suitable in the food industry and in the food processing industry especially in risky areas falling under the IFS standards (International Featured Standard Food)
- with adapter gland with pressure compensation (see options) allowing an application in all unprotected outdoor areas



Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Amb. temp. max. [°C]	Energy efficiency class	Substitute for *	Weight [kg] without packing material
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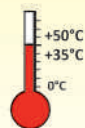
## 144 ..



14402 0001	<b>144 12L22</b>	17	2.500	147	50	A++	1 x 36W	8,0
14402 0002	<b>144 12L34</b>	24	3.330	139	45	A++	1 x 58W	8,0
14402 0003	<b>144 12L42</b>	31	4.110	133	40	A++	2 x 36W	8,0
14402 0004	<b>144 12L60</b>	46	6.200	135	35	A++	2 x 58W	8,0

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes



Dustproof/Waterproof  
Light Fittings

### Mounting material

#### Suspension eyes with bolts H8V P



#### Ceiling brackets 15A P



#### Pipe clamps RO84...A P



#### Wall bracket W26/45 P



Further accessories such as carrier rail systems please see EX-installation material in this catalogue.

## Accessories / Spare Parts

Article no.	Type	
<b>Spare diffusers for series 144...</b>		
84001 9004	<b>8404 SIL</b>	spare cover PC for 144 12L...
<b>Cable glands</b>		
25600 9000	<b>2560</b>	ex-proof plastic cable gland M25 x 1,5
90118 9000	<b>2538</b>	ex-proof plastic plug M25 x 1,5
90259 9003	<b>DAE20/25</b>	adapter gland M20 -> M25 with pressure compensation
<b>Mounting material</b>		
90001 0002	<b>H8V P</b>	2 suspension eyes with bolts, stainless steel
90000 0002	<b>15A P</b>	2 ceiling brackets, hot galvanized steel
90032 0002	<b>15AV P</b>	2 ceiling brackets, stainless steel
90037 0004	<b>RO84 112 A P</b>	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	<b>RO84 2 A P</b>	2 pipe clamps 2", stainless steel, with support
26000 0008	<b>W 26/L P</b>	2 wall mounting angles, sendzimized
26000 0002	<b>W 26/30 P</b>	2 wall mounting angles 30°, sendzimized
26000 0003	<b>W 26/45 P</b>	2 wall mounting angles 45°, sendzimized

## Dustproof/Waterproof LED Light Fitting with Diffuser Series 163/164 ... Generation 2



### Application:

In humid, wet and dusty indoor areas of industrial and agricultural premises, for workshops and car parks, cold stores, low temperature stores, cooling chambers and walkable low temperature cabins in hotels, hard to reach areas with high downtime and maintenance costs when replacing the lamps. Aggressive atmospheres: Please consult us.

### Design:

**Housing:** Glass fibre reinforced polyester resin, foamed gasket.

**Diffuser:** PMMA, modified for higher impact resistance, frosted for glare

limitation.

**Closure:** External plastic clips (KK) incl. 2 safety clips (KKS) to ensure protection against contact.

**Reflector:** Painted, removable complete with electronic components.

**Electrical connection:** 3-pole terminal block.

**Cable entries:** Variable, closed knock-outs on the short and long sides, and on the top, 2 blanking plugs M20.

**Mounting system:** 2 holes for ceiling mounting. Sealing and pressure disks for sealing are supplied inside the fitting.

### Technical data:

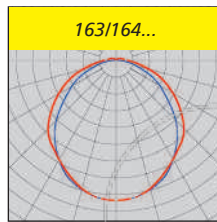
**ECG:** 220-240V, 50/60Hz, overload and short circuit protection

**LED:** line modules 4,000K, CRI > 80, life time  $L_{80}$  > 50,000h at max. ambient temperature (see notes)

**Ambient temperature:** 163... -20°C up to +40°C  
164... -20°C up to +35°C

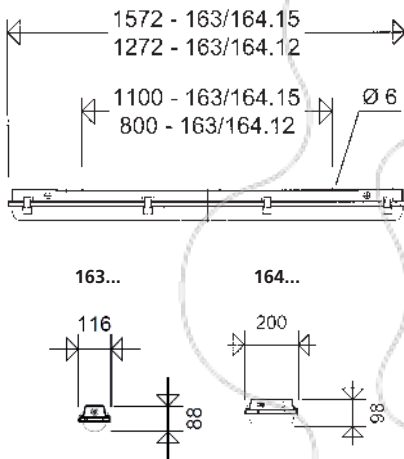
### Options:

- polycarbonate diffuser stippled clear
- 6.500 K
- stainless steel clips (KE)
- for connection to central power supply unit (ZB)



### SCHUCH quality - Your advantage:

- highest efficiency with luminous efficacy up to 157lm/W
- homogeneous illumination by using new, frosted diffusers, comfortable perception of light and brilliant glare limitation
- high colour reproduction  $R_a > 80$ , according to the guide lines for workplaces, suitable for nearly all plant locations
- with "D"-symbol, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- ECG and reflector with LED-modules may be replaced by qualified personnel on site
- future proof by using LED-modules according to Zhaga standard



Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Energy efficiency class	Substitute for *	Weight [kg] without packing material
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## 163/164 ... G2



### optimized for energy consumption (1 : 1 substitute for fluorescent types)

16302 0016	163 12L22G2	1	16	2.220	139	A++	1 x 36W	2,2
16302 0017	163 15L34G2	1	25	3.650	146	A++	1 x 58W	2,4
16302 0018	163 12L42G2	1	30	4.320	144	A++	2 x 36W	2,2
16302 0019	163 15L60G2	1	43	6.100	142	A++	2 x 58W	2,4

### with high luminous flux

16415 0016	164 12L90G2	2	65	9.400	145	A++	2 x 80W	3,1
16415 0017	164 15L120G2	2	86	12.570	146	A++	4 x 58W	3,8

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes

### Notes:

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Energy efficiency class	Substitute for *	Weight [kg] without packing material
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## 163/164 ... G2 DIMD



### dimmable via DALI interface

#### Design:

Same as standard version, but with DALI-ECG and 2 additional clamping points, marked with DA, Dimming level 1 -100%.

#### Note:

The conducting wires to the control input must be mains voltage stable and can be integrated in the connection cable.

16302 0020	<b>163 12L22G2 DIMD</b>	1	16	2.230	139	A++	1 x 36W	2,3
16302 0021	<b>163 15L34G2 DIMD</b>	1	24	3.480	145	A++	1 x 58W	2,8
16302 0022	<b>163 12L42G2 DIMD</b>	1	30	4.300	143	A++	2 x 36W	2,3
16302 0023	<b>163 15L60G2 DIMD</b>	1	43	6.200	144	A++	2 x 58W	2,8
16415 0018	<b>164 12L90G2 DIMD</b>	2	65	9.400	145	A++	2 x 80W	3,5
16415 0019	<b>164 15L120G2 DIMD</b>	2	86	12.570	146	A++	4 x 58W	4,1

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

## 163/164 ... G2 DIMC



### dimmable via „Corridor Mode“

#### Application:

Areas where light fittings are controlled via motion detector or door contact, e.g. storage areas, shelf aisles. Areas with high energy-saving potential at times without public access, e.g. car parks. Areas in which a 24-hour illumination is required.

#### Design:

Same as standard version, but with dimmable ECG and additional clamping point, marked with L'.

#### Note:

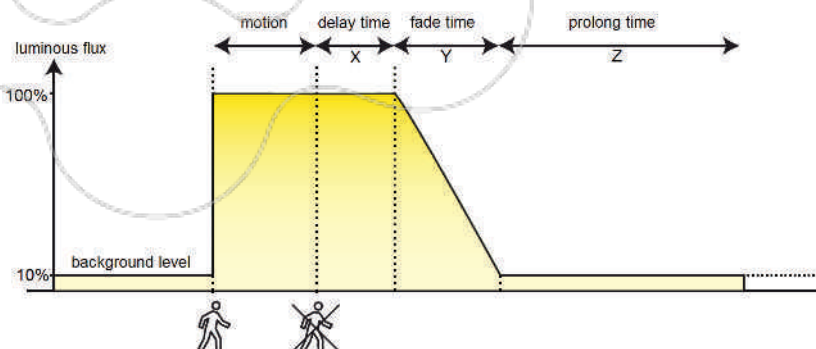
Such light fitting can be controlled by a light fitting of type 163 ... SENS.

#### Technical data:

The corridor function allows easy power reduction at a fixed value by means of an ordinary 230V control voltage.

#### Default settings:

- The Corridor Mode must be enabled during the installation of the light fittings. (s. mounting Instructions)
  - 100% luminous flux as long as the control phase is active.
  - Holding time of 100% luminous flux after switching off the control phase = 0 seconds. By setting the switch-off delay of the motion detector the customer can select an individual holding time
  - Dimming ramp 30 seconds
  - 10% luminous flux when no movement is detected (reduced operation). For some versions the minimum dimming level may be higher due to technical limitations.
  - Automatic cutoff deactivated (light fitting never switches off, but can be switched off by user at any time)
- Automatic cutoff is not available for some types



16302 0024	<b>163 12L22G2 DIMC</b>	1	16	2.230	139	A++	1 x 36W	2,2
16302 0025	<b>163 15L34G2 DIMC</b>	1	24	3.480	145	A++	1 x 58W	2,8
16302 0026	<b>163 12L42G2 DIMC</b>	1	30	4.300	143	A++	2 x 36W	2,2
16302 0027	<b>163 15L60G2 DIMC</b>	1	43	6.200	144	A++	2 x 58W	2,4
16415 0020	<b>164 12L90G2 DIMC</b>	2	65	9.400	145	A++	2 x 80W	3,5
16415 0021	<b>164 15L120G2 DIMC</b>	2	86	12.570	146	A++	4 x 58W	4,4

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Energy efficiency class	Substitute for *	Weight [kg] without packing material
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## 163 ... G2 SENS



### DIMC version with integrated motion detector

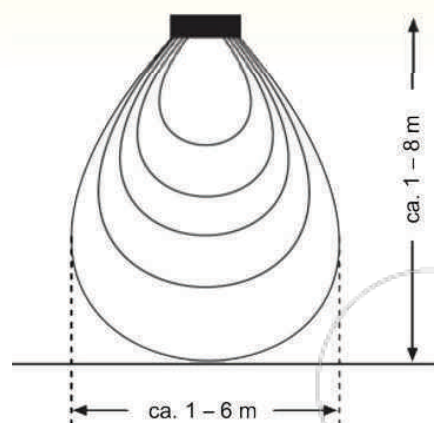
#### Application:

Areas with high energy-saving potential in times without public access. Areas in which a 24-hour illumination is required.

#### Design:

Same as standard version, but with dimmable ECG, integrated motion detector and additional clamping point, marked with 'L'. This light fitting (Master) controls all fittings of type 163... DIMC (Slaves), which are connected to the same circuit.

Detection range of sensor



**NEW**

#### Technical data:

**Detection range of sensor:** Adjustable from 1 m - 6 m (depending on the environment); Default: Maximum  
 – Objects (partition walls made from steel, concrete beams, etc.) which absorb or reflect the radar waves affect the detection range of the sensor. This must be checked and taken into account in the planning  
 – In general, the detection of radial movements (towards the HF sensor) is more reliable than the detection of tangential movements.

– Tangential movements in a circular path are partially not detected.

– Detection range max. 4m at light point heights of about 2.30m

– Detection range max. 6m at light point heights up to max. 8m.

**Delay time:** Adjustable from 10 sec to 30 min with Infrared remote control to 60 min; Default: 5 min

**Daylight control:** Adjustable from 2 Lux; Default: Maximum

**Ambient temperature:** -20 °C to +40°C

#### Factory settings:

– Dimming ramp 30 seconds

– 10% luminous flux when no movement is detected (reduced operation). For some versions the minimum dimming level may be higher due to technical limitations.

– Automatic cutoff deactivated (light fitting never switches off, but can be switched off by user at any time)

– Automatic cutoff is not available for some types

#### Parameter setting:

– Potentiometer on the HF sensor

– Infrared remote control (optional)

**NEW**

16302 0030	<b>163 12L22G2 SENS</b>	1	17	2.230	131	A++	1 x 36W	2,3
16302 0031	<b>163 12L42G2 SENS</b>	1	31	4.300	138	A++	2 x 36W	2,3
16302 0028	<b>163 15L34G2 SENS</b>	1	25	3.480	139	A++	1 x 58W	2,5
16302 0029	<b>163 15L60G2 SENS</b>	1	44	6.200	141	A++	2 x 58W	2,5

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

## 163/164 ... IFS



### for application in food industry areas

#### Application:

Food industry or food processing factories, suppliers to the food industry who are falling in the International Featured Standard Food, BRC, HACCP or who are subject to comparably strict requirements.

#### Design:

Same as type 163/164 .. L..but:

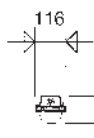
**Diffuser:** cover Polycarbonate stippled clear.

**Closure clips:** Stainless steel (KE), incl. 2 safety clips (KES) to ensure protection against contact.

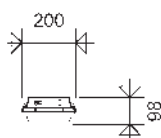
#### Notes:

The light fittings are not suitable for cleaning with cleaning agents or disinfectants as well as the cleaning with water-jet units.

163...



164...



#### optimized for energy consumption (1 : 1 substitute for fluorescent types)

16319 0001	<b>163 12L22 IFS</b>	1	16	2.250	141	A++	1 x 36W	2,2
16319 0002	<b>163 15L34 IFS</b>	1	25	3.900	156	A++	1 x 58W	2,4
16319 0003	<b>163 12L42 IFS</b>	1	30	4.720	157	A++	2 x 36W	2,2
16319 0004	<b>163 15L60 IFS</b>	1	43	6.570	153	A++	2 x 58W	2,4

#### with high luminous flux

16419 0001	<b>164 12L90 IFS</b>	2	61	9.440	155	A++	2 x 80W	3,5
16419 0002	<b>164 15L120 IFS</b>	2	80	12.500	156	A++	4 x 58W	4,4

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

#### IFS/BRC/VDMA/HACCP

SCHUCH Light Fittings designed for food and beverage industry applications are in accordance with IFS/BRC/VDMA standards. They can be operated without restrictions in operations that must fulfill the HACCP Concept.

## Accessories / Spare Parts

Article no.	Type		Article no.	Type	
<b>Spare glasses, PMMA, frosted</b>			<b>Spare glasses, PC, stippled clear</b>		
16711 9001	<b>167 036</b>	for 163 12 L.. G2	16311 9004	<b>163 036 PC</b>	for 163 12L.. IFS
16711 9002	<b>167 058</b>	for 163 15 L.. G2	16311 9005	<b>163 058 PC</b>	for 163 15L.. IFS
16411 9008	<b>164 036 F G2</b>	for 164 12 L.. G2	16411 9004	<b>164 036 PC</b>	for 164 12L.. IFS
16411 9009	<b>164 058 F G2</b>	for 164 15L.. G2	16411 9005	<b>164 058 PC</b>	for 164 15L.. IFS
16311 9006	<b>163 036 F</b>	for 163 12L...			
16311 9007	<b>163 058 F</b>	for 163 15L...			
16411 9006	<b>164 036 F</b>	for 164 12L...			
16411 9007	<b>164 058 F</b>	for 164 15L...			
<b>Fasteners</b>					
90123 9007	<b>163 KK/KKS V08</b>	plastic, incl. 2 safety clips (packing unit 8 pcs.)			
90123 9006	<b>163 KE/KES V08</b>	stainless steel, incl. 2 safety clips (packing unit 8 pcs.)			
90123 9004	<b>163 KKS P</b>	1 pair of safety clips (for LED version), plastic			
90123 9005	<b>163 KES P</b>	1 pair of safety clips (for LED version), stainless steel			
<b>Cable entries</b>					
90063 9000	<b>2511</b>	blanking plug M20			
25610 9000	<b>2561</b>	plastic cable gland M20 x 1,5			
25600 9000	<b>2560</b>	plastic cable gland M25 x 1,5			
<b>Protective guard, powder coated</b>					
90004 0002	<b>SK 140</b>	for 163 12...			
90004 0003	<b>SK 165</b>	for 163 15...			
90004 0005	<b>SK 240</b>	for 164 12...			
90004 0006	<b>SK 265</b>	for 164 15...			
<b>Pipe clamps</b>					
90245 0003	<b>163 RO 112A P</b>	1 1/2", stainless steel, with support (pair) for 163...			
90245 0004	<b>163 RO 2A P</b>	2", stainless steel, with support (pair) for 163...			
90245 0005	<b>164 RO 112A P</b>	1 1/2", stainless steel, with support (pair) for 164...			
90245 0006	<b>164 RO 2A P</b>	2", stainless steel, with support (pair) for 164...			
Attention: Observe the fixing distance when mounting on boom with pipe clamps (boom length!)					
<b>Accessories for ceiling mounting</b>					
90049 0002	<b>183 S</b>	swing hook for chain suspension			
90095 0001	<b>183 DS</b>	stainless steel bracket, with screw M5			
<b>Infrared remote control for SENS-light fittings</b>					
90295 9000	<b>FB SENSOTEC-Mini</b>	Infrared remote control for 163 .. SENS			

# LUXANO BASIC

## Dustproof/Waterproof LED Light Fitting with Diffuser Series 167 ... BASIC



### Application:

In humid, wet and dusty indoor areas of industrial and agricultural premises, for workshops and car parks, cold stores, low temperature stores, cooling chambers and walkable low temperature cabins in hotels, hard to reach areas, areas with high downtime and maintenance cost when replacing the lamps. Aggressive atmospheres: Please consult us.

### Design:

**Housing:** Glass fibre reinforced polyester resin, silicone gasket.

**Diffuser:** PMMA, modified for higher impact resistance, frosted for glare

limitation.

**Closure:** External plastic clips (KK) incl. 2 safety clips (KKS).

**Reflector:** Painted, removable, completed with electronic components.

**Electrical connection:** 3-pole terminal block.

**Cable entries:** Variable, closed knock-outs on the short and long sides, and on the top, 2 blanking plugs M20.

**Mounting system:** 2 holes for ceiling mount. Sealing and pressure disks are supplied with the fitting.

### Technical data:

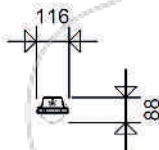
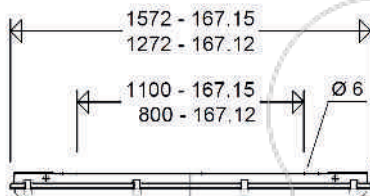
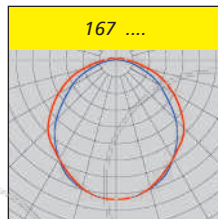
ECG: 230V, 50/60Hz

LED: Linear modules DOB 4,000K, CRI > 80, life time L<sub>70</sub> > 50,000h at max. ambient temperature (see notes)

Ambient temperature: -20°C up to +35°C

### Options:

- polycarbonate diffuser (stippled clear) – through wiring
- stainless steel clips (KE)



### SCHUCH quality - Your advantage:

- homogeneous illumination by using frosted diffusers, no individual light spots visible, comfortable perception of light and excellent glare limitation
- high colour rendering CRI > 80, according to the guide lines for workplaces, suitable for nearly all plant locations
- with "D"-symbol, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- no throw-away light fitting, reflector with ECG and LED-modules may be replaced by qualified personnel on site

Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Energy efficiency class	Substitute for *	Weight [kg] without packing material
16700 0001	167 12L22 BASIC	24	2.910	121	A++	1 x 36W	2,1
16700 0003	167 12L42 BASIC	41	4.590	113	A+	2 x 36W	2,1
16700 0002	167 15L34 BASIC	30	3.760	125	A++	1 x 58W	2,6
16700 0004	167 15L60 BASIC	50	5.820	116	A++	2 x 58W	2,6

### 167... BASIC



\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes

## Accessories / Spare Parts

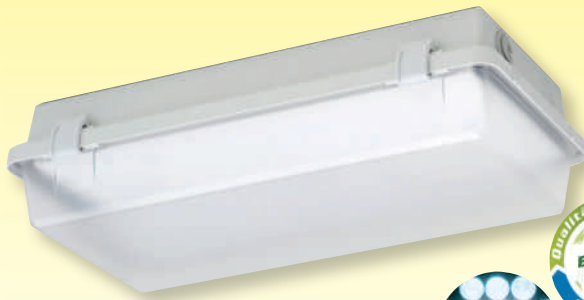
Article no.	Type		Article no.	Type	
spare glasses, PMMA, frosted			spare glasses, PC stippled clear		
16711 9001	167 036	for 167 12L...	16311 9004	163 036 PC	for 167 12L...
16711 9002	167 058	for 167 15L...	16311 9005	163 058 PC	for 167 15L...
Fasteners					
90123 9007	163 KK/KKS V08	plastic, incl. 2 safety clips (packing unit 8 pcs.)			
90123 9006	163 KE/KES V08	stainless steel, incl. 2 safety clips (packing unit 8 pcs.)			
90123 9004	163 KKS P	1 pair of safety clips (for LED version), plastic			
90123 9005	163 KES P	1 pair of safety clips (for LED version), stainless steel			
Cable entries					
90063 9000	2511	blanking plug M20			
25610 9000	2561	plastic cable gland M20 x 1,5			
Accessories for ceiling mounting					
90049 0002	183 S	swing hook for chain suspension			
90095 0001	183 DS	stainless steel bracket, with screw M5			

### Notes:

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



**NEW**

## Compact Dustproof/Waterproof LED-Light Fitting Series 164KL... Generation 2

### Application:

Humid, wet and dusty interior areas, walkable low temperature cabins, restaurants, supermarkets, hotels etc., climate chambers, areas which are difficult to access, roofed outdoor areas etc. (aggressive agents – please consult us).

### Design:

**Housing:** Glass fibre reinforced polyester, foamed silicone gasket.

**Diffuser:** PMMA frosted for glare limit-

ation.

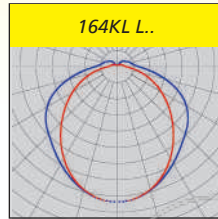
**Clips:** Single-piece plastic clips (KK).

**Reflector:** Aluminium painted, detachable, carrying the electrical components.

**Connection terminal:** 3 poles

**Cable entries:** Variable, at the ends and top of the housing, 2 plugs M20.

**Mounting system:** 2 holes for ceiling mounting. Sealing and pressure disks are supplied inside the fitting.



### Technical data:

**LED:** Line modules, 4.000K, CRI > 80, life cycle of the LED L<sub>80</sub> > 50.000h.

**ECG:** 220-240V, 50/60Hz, overload and short circuit protection.

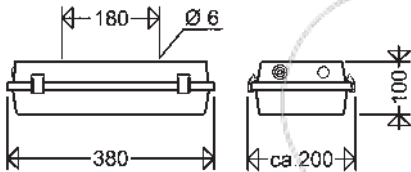
**Ambient temperature:** -20°C up to +30°C

### Options:

- for connection to 24V DC-supply (Type 164KL L08G2)
- for connection to group or central battery systems (see chapter „Emergency light fittings“)
- for higher/lower ambient temperatures
- stainless steel clips (KE)
- cable entries up to M25 x 1.5

### SCHUCH quality - Your advantage:

- highest efficiency with luminous efficacy up to 115lm/W
- homogeneous illumination by using new frosted diffusers, comfortable perception of light and brilliant glare limitation
- high colour reproduction CRI > 80, according to the guide lines for workplaces suitable for nearly all plant locations
- with "D"-symbol, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- ECG and reflector with LED-module may be replaced by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. **	Weight [kg] without packing material
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### 164KL...

16407 0031	164KL L05G2	4,5	490	109	A++	1 x 8W	1,0
16407 0032	164KL L08G2	8,5	840	99	A++	1 x 11W	1,0
16407 0033	164KL L11G2	10,0	1.150	115	A++	1 x 18W	1,0
16407 0034	164KL L15G2	14,0	1.490	106	A++	1 x 24W	1,0

\* see notes

\*\*The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

## Accessories / Spare Parts

Article no.	Type	
<b>Spare glasses PMMA frosted</b>		
16413 9006	164 000 F	for 164KL L..
16413 9007	164 000 F G2	for 164KL L.. G2
<b>Cable entries</b>		
90063 9000	2511	blanking plug M20
25610 9000	2561	plastic cable gland M20 x 1,5
25600 9000	2560	plastic cable gland M25 x 1,5
<b>Mounting brackets</b>		
90232 0012	WA 45 ALU	wall bracket 45°
90232 0013	WA 90 ALU	wall bracket 90°
90232 0004	DA	1 pair of ceiling/wall bracket 90°
<b>Fasteners</b>		
90123 9003	163 KK VE08	plastic (packing unit 8)
90123 9002	163 KE VE08	stainless steel (packing unit 8)

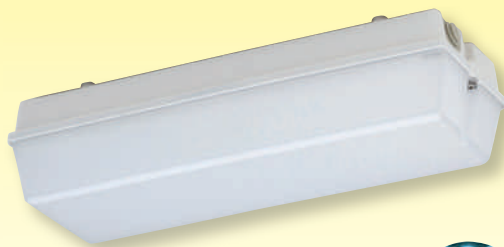
### Notes:

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Dustproof/Waterproof  
Light Fittings



## Small High Impact Resistant Dust-/Waterproof LED-Light Fittings with Diffusers Series 130/131 ..

### Application:

Humid, wet and dusty interior areas, walkable low temperature cabins, restaurants, supermarkets, hotels etc., areas which are difficult to access, roofed outdoor areas etc.

### Design:

**Housing:** Polycarbonate, white, silicone gasket.

**Diffuser:** Polycarbonate frosted, at one side with multiple hinge for suspending and unhinging the diffuser, captive stainless steel screw on the other side for closing the fitting.

**Reflector:** Aluminium painted, with LED and all electrical components, ready wired for installation.

**Connection:** Via 3-pole terminal.

**Cable entry:**

**Series 130...**: 1 grommet M16 at the locking side.

**Series 131...**: 1 grommet M20 at each front side.

**Mounting:** 2 borings serve for direct ceiling mounting. Sealing and pressure disks included.

### Technical data:

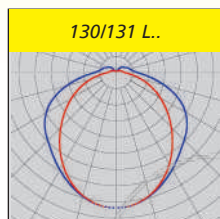
**LED:** Highpower LED, 4.000K, CRI > 80, life cycle of the LED  $L_{80} > 50.000h$  at max. ambient temperature (see notes)

**ECG:** 220-240V, 50/60Hz, overload and short circuit protection.

**Ambient temperature:** -20°C up to +30°C

### Options:

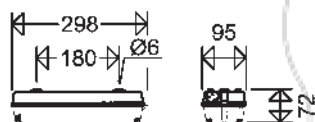
- for connection to 24V DC supply (types 130/131 L07)
- for connection to group or central battery systems (see chapter „Emergency Light Fittings“)
- cable entry in the back of the housing (series 130...)
- cable looping at 1 small side (131... RR)
- for higher/lower ambient temperatures



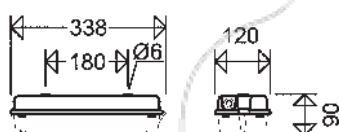
### SCHUCH quality - Your advantage:

- highest efficiency with luminous efficacy up to 115lm/W
- homogeneous illumination by using frosted diffusers comfortable perception of light and brilliant glare limitation
- high colour reproduction CRI > 80, according to the guide lines for workplaces suitable for nearly all plant locations
- with "D"-symbol, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- quality light fitting with above average high mechanical strength and chemical resistance
- solid cover with high wall thickness also at the critical areas (corners)
- ECG and reflector with LED-module may be replaced by qualified personnel on site
- future proof by using LED-modules according to Zhaga standard

Series 130...



Series 131...



## 130/131 ..



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W] *	Energy efficiency class	substitute for ca. **	Weight [kg] without packing material
13003 0051	130 L07	8,0	750	94	A++	1 x 11W	0,4
13101 0001	131 L04	4,0	460	115	A++	1 x 8W	0,5
13101 0002	131 L07	8,0	780	98	A++	1 x 11W	0,5
13101 0003	131 L10	9,5	1.050	110	A++	1 x 18W	0,5
13101 0004	131 L13	13,0	1.370	105	A++	2 x 11W	0,5

\* see notes

\*\*The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

## Accessories / Spare Parts

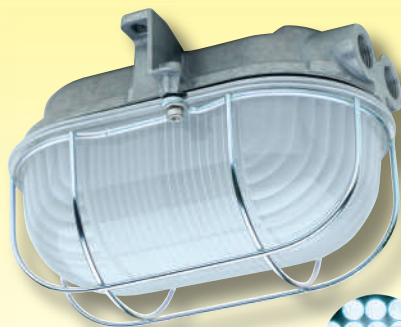
Article no.	Type	
13011 9007	130 000 F	Spare covers - PC, frosted (polycarbonate) for series 130... L
13111 9006	131 000 F	Spare covers - PC, frosted (polycarbonate) for series 131... L
90062 9000	2510	spare-grommet, M16 (for 130...)
90063 9000	2511	spare-grommet, M20 (for 131...)
25610 9000	2561	plastic cable gland, M20 x 1,5 (for 131...)
90004 0009	SK 130/131/2	Wire guard thick layer passivated
90232 0012	WA 45 ALU	wall bracket 45°
90232 0013	WA 90 ALU	wall bracket 90°
90232 0004	DA	ceiling bracket

### Notes:

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



## LED Oval-Shaped Light Fitting Series 3610...

### Applications:

In areas with extreme operating conditions, cold storage cells, areas that are difficult to access, etc..

### Design:

**Housing:** Cast aluminium, unpainted.

**Wire guard:** Steel, passivated.

**Glass bowl:** Silicate, frosted with internal prism structure, silicone gasket.

**Reflector:** Aluminium painted, with

LED-Linear modules.

**Connection:** 2-pole. Earthing by separate screw at the enclosure.

**Cable entries:** 2 x M20 x 1.5.

**Mounting system:** 2 integral fixing lugs

**Note:** Cable glands are not included in the scope of delivery. Please order separately (See accessories).

### Technical Data:

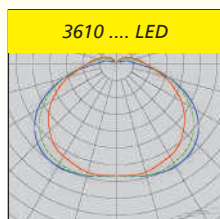
**LED:** Line modules 4,000K, CRI > 80, life cycle  $L_{80} > 50,000h$  at max. ambient temperature (see notes).

**ECG:** 220-240V, 50/60Hz, overload and short circuit protection.

**Ambient temperature:** -20°C up to +35°C

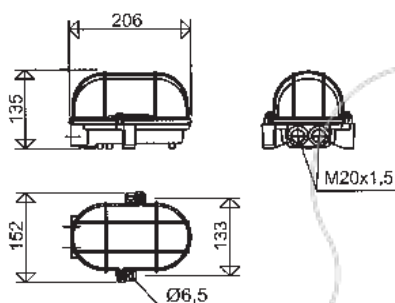
### Options:

— coloured LED for signalling applications



### SCHUCH Quality - your advantage:

- robust fitting for rough environment
- ideal for small spacing
- immediate full light output, even at low temperatures
- homogeneous illumination by using frosted diffusers
- with "D"-sign, suitable for rooms with increased fire risk
- almost maintenance-free operation due to long service life of the LED
- quick mounting with outer fixing points



Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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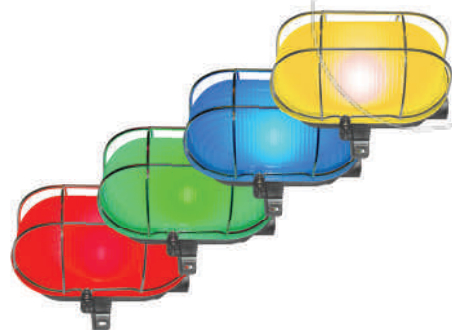
### 3610...



36102 0031	<b>3610 L04</b>	5,0	550	110	A++	1 x 40W	1,4
36102 0032	<b>3610 L10</b>	9,5	960	101	A++	1 x 75W	1,4

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes



3610... with coloured LED for signalling applications

### Notes:

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## Accessories / Spare Parts

Article No.	Type	
90075 9002	<b>1595 SATINIERT</b>	spare glass (frosted)
36101 9000	<b>3610 K</b>	spare wire guard
59600 9001	<b>596 SIL</b>	spare gasket
<b>Cable glands M20 x 1,5</b>		
25610 9000	<b>2561</b>	plastic gland M20 x 1.5
25730 9000	<b>2573</b>	plastic threaded blanking plug M20 x 1.5



## Compact LED Fitting Series 3611 ...

### Application:

Humid, wet and dusty locations in commerce and industry, areas with rough conditions of operation, constricted space, almost inaccessible locations, excavators, giant equipment, runways, cable channels, stair towers, walkable low temperature booths, wind power stations, purpose of signalization (with coloured LED) etc.

### Design:

**Housing:** Die-cast aluminium, painted in white, all operating components located inside the housing and wired ready for connection.

**Diffuser:** PMMA satined, foamed silicone gasket.

**Connection terminal:** 3-poles.

**Cable entry:** 1 plug M20 at the front side.

**Mounting:** 2 outer fixing points.

### Technical data:

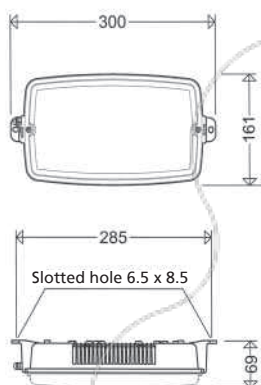
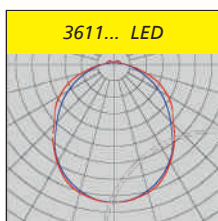
**LED:** Line modules 4,000K, CRI > 80, L<sub>70</sub> > 50.000h at max. ambient temperature (see notes)

**ECG:** 220-240V, 50/60Hz, overload and short circuit protection.

**Ambient temperatures:** -20°C up to +30°C

### Options:

- for connection to 24V supply
- coloured LED for signalling applications
- PC glass (white opalescent)
- cable looping system on one side
- for outdoor installation
- special version for areas subject to vibrations and shakings (RF)
- for connection to group or central battery systems (ZB)
- for higher/lower ambient temperatures



### SCHUCH Quality - Your advantage:

- robust fitting for rough environment
- ideal for small spacing
- instant light with max. luminous flux even at very low temperatures
- **homogeneous illumination by using frosted diffusers**, comfortable perception of light
- with "D"-sign, suitable for rooms with increased fire risk
- almost maintenance-free operation due to long service life of the LED
- quick mounting with outer fixing points

Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
36110 0006	<b>3611 L05</b>	5,0	560	112	A++	1 x 8W	1,0
36110 0007	<b>3611 L10</b>	10,0	1.010	101	A++	1 x 18W	1,0

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes

### Notes:

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## Accessories / Spare Parts

Article No.	Type	
36004 9001	<b>3611 01</b>	spare diffuser, PMMA, frosted
36004 9002	<b>3611 02</b>	spare diffuser, PC, white-opalescent

NEW

## PRIMO LED-Profile Tube Light Fitting for areas with harmful gas load Series 107...

### Application:

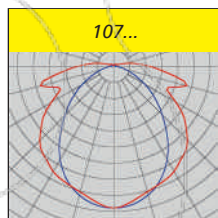
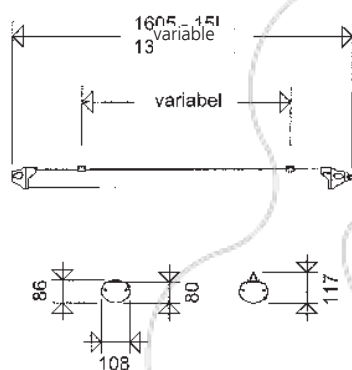
Areas in workshops, commerce and industry, which are subject to harmful gas loads in the ambient air, which may damage the LEDs or even cause their total failure. The so-called harmful gases include sulfur and chlorine compounds, which can be found in the chemical industry, papermaking or tire production, but especially ammonia. For use in agriculture and animal husbandry with high ammonia concentration, see version LW.

### Design:

**Profile tube:** Acrylic glass (PMMA), modified for higher impact resistance, frosted for glare limitation, with glued end caps made from glass fibre reinforced PBT.  
**Reflector:** Painted aluminum, carrying all electrical components.  
**Connection:** Quick plug connection (Plug & Play). Endcap with integrated plug, socket included in scope of delivery.  
**Mounting:** Variable mounting distance by means of stainless steel clips (included in scope of delivery). For direct ceiling and wall mounting or pendant mounting.

### Note:

The housing materials used for the PRIMO show good chemical resistance against a variety of chemicals.  
See also paragraph "Plastics in SCHUCH luminaires" in the "Technical supplement"



### Technical data: Version 107... HR / HR DIMD / LW DIMD:

LED: Line modules 4,000K, CRI > 80, L<sub>80</sub> > 50,000h at max. ambient temperature (see notes)

ECG: 220-240V, 50/60Hz, overload and short-circuit protection  
Ambient temperature: -25°C up to see article tables

### Technical data: Version 107... LW:

LED: Line modules DOB 4,000K, CRI > 80, L<sub>70</sub> > 50,000h at max. ambient temperature (see notes)

ECG: 230, 50/60Hz

Ambient temperature: -20°C up to +40°C

### Options:

- 6.500K
- dimmable version with DALI interface (DIMD)
- dimmable via „Corridor Mode“ (DIMC)
- for low ambient temperatures
- for connection to central power supply unit (ZB)
- with through wiring up to 5 x 2,5 mm<sup>2</sup>

### SCHUCH Quality - Your advantage:

- gas tight/gas resistant, reliable protection of the LEDs from damage and total failure
- dust- and pressure water-tight, suitable for high-pressure cleaners (under preparation)
- for use in unprotected outdoor areas
- PMMA-profile tube modified for high mechanical impact resistance
- homogeneous illumination by using a frosted profile tube, no particular light points visible, comfortable perception of light, brilliant glare limitation
- integrated Plug & Play connector for quick mains connection
- fast mounting with variable mounting distances by means of movable clips



Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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### 107... HR (High Resistant)

10700 0013	107 12L22 HR	15	2.200	138	A++	1 x 36W	1,6
10700 0014	107 12L42 HR	30	4.240	141	A++	2 x 36W	1,6
10700 0015	107 15L34 HR	24	3.480	144	A++	1 x 58W	1,9
10700 0016	107 15L60 HR	43	6.160	143	A++	2 x 58W	1,9
10700 0043	107 12L22 HR DIMD	15	2.200	138	A++	1 x 36W	1,6
10700 0044	107 12L42 HR DIMD	30	4.240	141	A++	2 x 36W	1,6
10700 0045	107 15L34 HR DIMD	24	3.480	144	A++	1 x 58W	1,9
10700 0046	107 15L60 HR DIMD	43	6.160	143	A++	2 x 58W	1,9

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

1) IP68 und IPX9K in preparation.

### Notes:

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Dustproof/Waterproof  
Light Fittings

Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 107... LW



### for use in stables and agricultural premises

#### Application:

For use in agriculture and animal husbandry with high ammonia concentration.

#### Advantages of the LM version:

- ammonia-resistant
- DIMD version, specially designed for use in poultry farming in accordance with the Animal Welfare Animal Husbandry Regulation

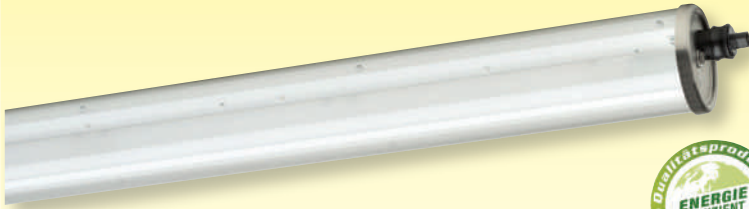
10700 0023	<b>107 12L22 LW</b>	24	2.830	118	A++	1 x 36W	1,5
10700 0024	<b>107 12L42 LW</b>	41	4.500	110	A+	2 x 36W	1,5
10700 0025	<b>107 15L34 LW</b>	30	3.710	124	A++	1 x 58W	1,8
10700 0026	<b>107 15L60 LW</b>	50	5.860	117	A++	2 x 58W	1,8
10700 0053	<b>107 12L22 LW DIMD</b>	15	2.200	138	A++	1 x 36W	1,6
10700 0054	<b>107 12L42 LW DIMD</b>	30	4.240	141	A++	2 x 36W	1,6
10700 0055	<b>107 15L34 LW DIMD</b>	24	3.480	144	A++	1 x 58W	1,9
10700 0056	<b>107 15L60 LW DIMD</b>	43	6.160	143	A++	2 x 58W	1,9

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

1) IP68 und IPX9K in preparation.

## TUBEO Tubular LED Light Fitting Series 110...



### Application:

Public, commercial and industrial areas which are endangered by water jets, water spray, dusty atmospheres or high mechanical stress (vandalism). Car washes, inspections pits, docks, ships, food industry, slaughter houses, subway and railway stations endangered by vandalism, prisons, car parks, etc..

### Design:

**Housing:** Impact and shatter resistant clear carbonate tube, Ø 100mm.

**Fastener:** Tubular locking cap made of

stainless steel with foamed gasket, special element for compensation of length expansion.

**Reflector:** Sheet steel with electric components and frosted cover for glare limitation.

**Connecting:** 3-pole (DIMD version 5-pole) quick connect IP69K („Plug and play“). Plug integrated and internally pre-wired, receptacle included for mains assembly.

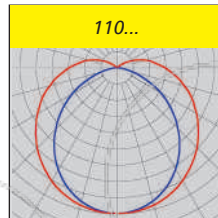
**Mounting:** Supplied with 2 stainless steel pipe clamps.

### Technical data:

**LED:** Line modules 4,000K, CRI > 80, L<sub>70B10</sub> > 50,000h at max. ambient temperature (see notes)

**ECG:** 220-240V, 50/60Hz, overload and short-circuit protection

**Ambient temperature:** -25°C up to see article tables



### Options:

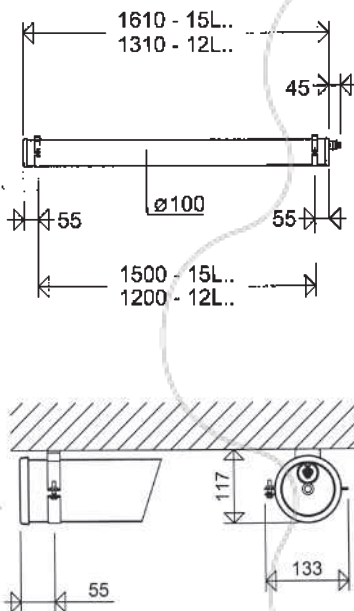
- 6.500K
- PC-tube (4 x IK10/80 Joule)
- for low ambient temperatures
- according to „International Featured Standard Food“
- optics with 30° angle (T)
- optics with 60° angle (TB)
- for connection to central power supply unit (ZB)

### SCHUCH Quality - Your advantage:

sturdy and extremely rugged tubular light fitting for application in rough environments

- dust- and pressure water-proof (IP68 3m/30min)
- suitable for cleaning with high pressure cleaner (IPX9K)
- highest efficiency with luminous efficacy up to 155lm/W
- with „D“-sign, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- high colour reproduction CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- homogeneous illumination by using frosted covers, no particular light points visible, comfortable perception of light, brilliant glare limitation
- quick connection without opening the fitting, „plug and play“
- flexible mounting with pipe clamps (stainless steel)
- optional high-impact resistant polycarbonate tube 4 x IK10 (80 joule min.) for rough environments, applications in the food industry and areas with a risk of vandalism
- future proof by using standardized LED-modules (Zhaga)

Dustproof/Waterproof Light Fittings



For vertical mounting please consult us!

Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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### 110...



11000 0003	<b>110 12L22</b>	16	2.310	144	45	A++	1 x 36W	4,4
11000 0013	<b>110 12L22 DIMD</b>	17	2.310	136	45	A++	1 x 36W	4,5
11000 0004	<b>110 15L34</b>	23	3.550	154	45	A++	1 x 58W	5,2
11000 0014	<b>110 15L34 DIMD</b>	24	3.550	148	45	A++	1 x 58W	5,3
11000 0005	<b>110 12L42</b>	30	4.350	145	35	A++	2 x 36W	4,4
11000 0015	<b>110 12L42 DIMD</b>	31	4.350	140	35	A++	2 x 36W	4,5
11000 0006	<b>110 15L60</b>	41	6.040	147	35	A++	2 x 58W	5,2
11000 0016	<b>110 15L60 DIMD</b>	42	6.040	144	35	A++	2 x 58W	5,3

### Notes:

Properties, limitations and details for controlling LED-light fittings:

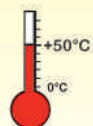
See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.  
\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 110... H50



for high ambient temperatures up to +50°C

11000 0055	<b>110 12L42 H50</b>	31	4.710	152	50	A++	2 x 36W	4,4
11000 0056	<b>110 15L60 H50</b>	39	6.040	155	50	A++	2 x 58W	5,0

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.  
 \*\* see notes, power consumption in dimming mode depends on the dimming adjustment!



## Accessories / Spare Parts

Article No.	Type	
90272 9001	<b>110 RO V P</b>	1 pair of pipe clamps, stainless steel
90273 9001	<b>110 036</b>	spare tube PMMA for 110 12L..
90273 9002	<b>110 058</b>	spare tube PMMA for 110 15L..
90273 9003	<b>110 036 PC</b>	spare tube PC for 110 12L..
90273 9004	<b>110 058 PC</b>	spare tube PC for 110 15L..
90049 0002	<b>183 S</b>	hook for chain suspension, stainless steel
90278 9001	<b>110 SVDA-3</b>	splitter connector for in-out wiring on one end



## LED-Sheet Steel Light Fittings Series 190/191/192/181/182/187/188...

### Application:

Industrial, tradesmen's and commercial facilities with extreme conditions, aggressive environments (e.g. oil, grease) or high mechanical exposure, production areas and warehouses, for locations with high ambient temperatures, for areas with extreme dust appearance (types 187/188), areas with high downtime and maintenance costs due to lamp change.

### Design:

**Housing:** Sheet steel, light grey, powder coated.

**Safety glass:** Frameless, frosted, internal hinge, tiltable.

**Reflector:** Aluminium painted, with LED-modules and all electrical components screwed to the glass, wired ready for connection.

**Central locking:** Internal, to be opened from outside with 5mm allen key.

**Terminal:** 5-pole terminal, clamping range 2.5 mm<sup>2</sup> max.

**Cable entries:** 3 x M20 (190... LED) or 3 x M25 (2 cable gland and 2 blanking plugs), looping the cable at one side possible.

### Mounting:

**190 ...:** 2 fixing holes Ø 9mm, Sealing and pressure disks included. Use mounting screws Ø 6mm.

**181/182 ...:** For suspension eyes with bolts (H8VP) or ceiling brackets (15AP) (not included), see „Accessories / Spare Parts“.

**187/188 ...:** 2 eyebolts (RS6) included.

**191/192 ...:** 4 mounting brackets included. Additional mounting material see „Accessories / Spare Parts“.

### Technical data:

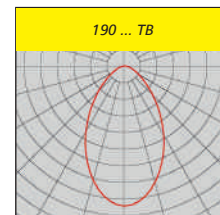
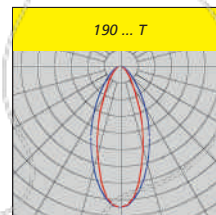
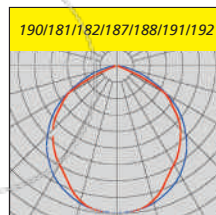
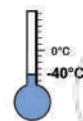
**LED:** Line-modules 4,000K; CRI>80, life expectancy L<sub>80</sub> > 50,000 hours (at max. ambient temperature)

**ECG:** 220-240V, 50/60Hz, overload and short circuit protection

**Ambient temperature:** -20°C up to see table of articles

### Options:

- for low ambient temperatures down to -40°C
- dimmable version with DALI interface (DIMD)
- for connection to central or group battery system (ZB)
- for use in blasting locations or cabins (181/182... SSK)
- clear safety glass for high light point heights (K)
- in stainless steel, powder coated
- with frame, retrofitable (181/182..., 191/192...)
- with clear PC pane, according to „International Featured Standard Food“ (181/182... IFS and 191/192...IFS)



### Note:

In case of permanently humid atmosphere please ask for stainless steel housings.

### SCHUCH Quality - Your advantage:

- especially suitable for rough industrial application
  - robust, smooth sheet steel housing with all latches inside the housing
  - permanent safe closing due to frameless safety glass pane with internal Original SCHUCH-central locking system
- highest efficiency with Luminous efficacy output up to 142 lm/W
- maximum energy cost saving by using dimmable types
- depending on suitable version for operation in ambient temperatures up to maximum 55°C
- reflector and cover in sandwich design to protect the LED-Modules from mechanical or electrostatic damages due to accidental contact
- immediate light with max. luminous flux
- uniform illumination due to frosted safety glass pane, comfortable light perception, excellent glare limitation
- high colour rendering CRI > 80, according to the work place guidelines suitable for nearly all branches
- with „D“-sign, therefore suitable for applications in rooms/locations with increased fire risk due to flammable dusts and fibers.
- low maintenance and downtime costs due to almost maintenance-free
- future-proof due to use of standardized LED-modules (Zhaga)



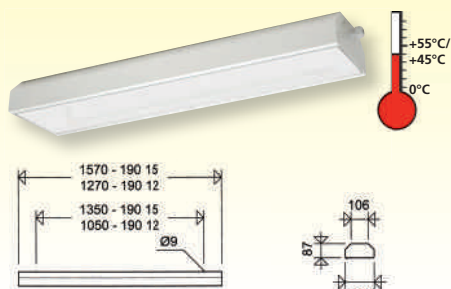
### Notes:

Properties, limitations and details for controlling LED-light fittings:

See “Technical Supplement”

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Dustproof/Waterproof  
Light Fittings



Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Ambient temp. max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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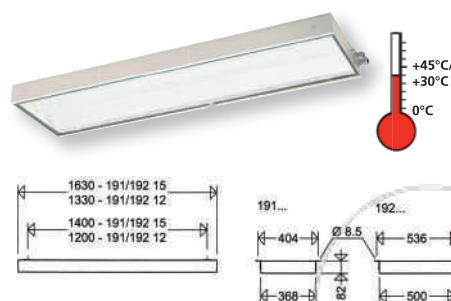
## 190 ...



19002 0010	190 12L40	1	30	4.150	138	60	A++	1 x 36 / 1 x 58	8,5
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with higher luminous flux for areas with higher illumination requirement

19002 0011	190 12L60	1	44	6.100	139	55	A++	2 x 36 / 2 x 58	8,7
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## 191/192 ...



Application: Extremely low profiled housing

especially suited for production areas and warehouses

19105 0010	191 12L120	2	89	12.600	142	50	A++	2 x 58 bzw. 2 x 35 / 1 x 80	17,4
19105 0012	191 15L150	3	113	15.700	139	50	A++	3 x 58 bzw. 4 x 35 / 3 x 49 / 2 x 80	20,2
19105 0014	192 12L160	3	121	16.550	137	50	A++	3 x 58 bzw. 4 x 35 / 3 x 49 / 2 x 80	23,7
19105 0016	192 15L200	4	151	20.800	138	50	A++	3 x 58 bzw. 4 x 49 / 3 x 80	26,7

with higher luminous flux for areas with higher illumination requirement

19105 0011	191 12L190	3	134	18.700	140	40	A++	4 x 36 bzw. 3 x 58	17,2
19105 0013	191 15L240	3	168	23.400	139	35	A++	4 x 58 bzw. 4 x 54 / 3 x 80	20,2
19105 0015	192 12L250	4	180	24.600	137	40	A++	4 x 58 bzw. 4 x 54 / 3 x 80	22,9
19105 0017	192 15L310	4	226	30.550	135	35	A++	4 x 80	26,7

## 191 ... TB



narrow wide beam - for light point heights of more than 10m

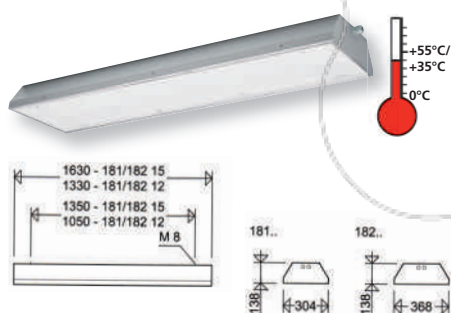
19105 0053	191 15L310TB	3	297	35.070	118	30	A++	4 x 80	20,2
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## 191 ... T



narrow beam - for light point heights of more than 16m

19105 0052	191 15L310T	3	297	35.370	119	30	A++	4 x 80	20,2
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## 181/182 ...



18007 0010	181 12L80	2	61	8.350	137	60	A++	2 x 58 bzw. 2 x 35 / 1 x 80	15,2
18007 0012	181 15L100	2	75	10.350	138	60	A++	2 x 58 bzw. 2 x 49	18,9
18007 0014	182 12L120	2	89	12.600	142	55	A++	2 x 58 bzw. 2 x 35 / 1 x 80	17,6
18007 0016	182 15L150	3	113	15.700	139	55	A++	3 x 58 bzw. 4 x 35 / 3 x 49 / 2 x 80	22,8

with higher luminous flux for areas with higher illumination requirement

18007 0011	181 12L120	2	90	12.100	134	50	A++	3 x 36 bzw. 3 x 35 / 2 x 54	15,3
18007 0013	181 15L150	2	112	15.200	136	45	A++	3 x 58 bzw. 4 x 35 / 3 x 49 / 2 x 80	18,9
18007 0015	182 12L190	3	134	18.700	140	45	A++	4 x 36 bzw. 3 x 58	18,0
18007 0017	182 15L240	3	168	23.400	139	40	A++	4 x 58 bzw. 4 x 54 / 3 x 80	23,3

## 182 ... TB



narrow wide beam - for light point heights more than 10m

18007 0053	182 15L310TB	3	297	35.070	118	35	A++	4 x 80	23,3
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## 181/182 ... T

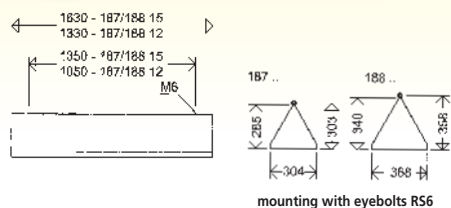


narrow beam - for light point heights more than 10m

18007 0051	181 15L240T	2	200	26.100	131	40	A++	4 x 58 bzw. 4 x 54 / 3 x 80	18,9
18007 0052	182 15L310T	3	297	35.370	119	35	A++	4 x 80	23,3

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Ambient temp. max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 187/188 ...



### Application:

Triangular shaped housing against dust. for areas with extreme dust appearance, for locations with

increased fire risk due to deposits of flammable dusts and fibres, Erg. agriculture premises (straw storage, carpenter's workshops lumber mill,

cement plant, gypsum storages, etc.)

18705 0010	<b>187 12L80</b>	2	61	8.350	137	60	A++	2 x 58 bzw. 2 x 35 / 1 x 80	17,4
18705 0012	<b>187 15L100</b>	2	75	10.350	138	60	A++	2 x 58 bzw. 2 x 49	19,4
18705 0014	<b>188 12L120</b>	2	89	12.600	142	55	A++	2 x 58 bzw. 2 x 35 / 1 x 80	22,6
18705 0016	<b>188 15L150</b>	3	113	15.700	139	55	A++	3 x 58 bzw. 4 x 35 / 3 x 49 / 2 x 80	23,8

### with higher luminous flux for areas with higher illumination requirement

18705 0011	<b>187 12L120</b>	2	90	12.100	134	50	A++	3 x 36 bzw. 3 x 35 / 2 x 54	15,7
18705 0013	<b>187 15L150</b>	2	112	15.200	136	45	A++	3 x 58 bzw. 4 x 35 / 3 x 49 / 2 x 80	20,8
18705 0015	<b>188 12L190</b>	3	134	18.700	140	45	A++	4 x 36 bzw. 3 x 58	20,3
18705 0017	<b>188 15L240</b>	3	168	23.400	139	40	A++	4 x 58 bzw. 4 x 54 / 3 x 80	23,8

## 188 ... TB



### narrow wide beam - for light point heights more than 10m

18705 0053	<b>188 15L310TB</b>	3	297	35.070	118	35	A++	4 x 80	25,2
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## 188 ... T



### narrow beam - for light point heights more than 10m

18705 0051	<b>187 15L240T</b>	2	200	26.100	131	40	A++	4 x 58 bzw. 4 x 54 / 3 x 80	19,4
18705 0052	<b>188 15L310T</b>	3	297	35.370	119	35	A++	4 x 80	25,2

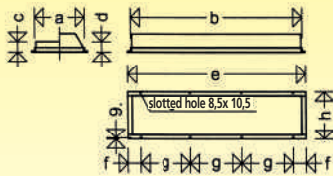
\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



Dustproof/Waterproof  
Light Fittings

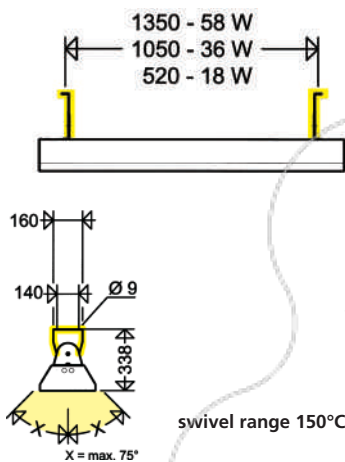
## Mounting Dimensions



Installation Frame	a	b	c	d	e	f	g	h
EB 181/36	324	1.350	140		1.396	98	400	370
EB 181/58	324	1.650	140		1.696	48	400	370
EB 182/36	388	1.350	140	80	1.396	98	400	434
EB 182/58	388	1.650	140	80	1.696	48	400	434
EB 192/36	520	1.350		80	1.396	98	400	566
EB 192/58	520	1.650		80	1.696	48	400	566

**Note:** The additional length of the cable entry must be taken into account when mounting!

## series 181/182... with Swivel Arm Mounting System



## Frame for Recessed Mounting

retrofit possible!

Light fittings of the series 181 / 182... and 191 / 192... can also be adapted for flush mounting in ceilings or walls using a separately supplied frame. The light fitting is mounted using M5 screws along the long sides (see dimension drawing).).

Article No.	Type	
18091 0002	EB 181/36	for 181 012..
18091 0003	EB 181/58	for 181 015..
18091 0005	EB 182/36	for 182 12.. / 191 12..
18091 0006	EB 182/58	for 182 15.. / 191 15..
18091 0014	EB 192/36	for 192 12..
18091 0015	EB 192/58	for 192 15..

### Note:

When inquiring / ordering, please state the type of ceiling in which the light fitting is to be mounted. With certain ceiling designs, it may be necessary to move the cable entry to the rear of the light fitting.

### Mounting possibilities:

- in suspended ceilings (standard, when no specification is given).
- in recesses in concrete walls.
- in insulated ceilings acc. to EN 60598

## Swivel Arm Mounting System

retrofit possible!

Light fittings series 181 / 182... can also be adapted for swivel mounting using separately supplied swivel arm mounting accessories. The swivel mounting brackets are screwed to the light fitting at the suspension points. Swivel angle  $\pm 75^\circ$  (see dimension drawing).

Article No.	Type	
18092 0001	SWA 181/182	for all lamp lengths, consisting of 2 swivel brackets and screws M8
18092 0002	SWA 181/182 E	stainless steel version for all lamp lengths, consisting of 2 swivel brackets and screws M8

## Accessories / Spare Parts

Article No.	Type	
<b>Spare glasses, frosted</b>		
19001 9004	190 28/54 F	for 190 12...
19001 9005	190 35/49/80 F	for 190 15...
18090 9020	181 36-1 F	for 181 12... / 187 12...
18090 9021	181 58-1 F	for 181 15... / 187 15...
18090 9023	182 36-1 F	for 182 12... / 188 12... / 191 12...
18090 9024	182 58-1 F	for 182 15... / 188 15... / 191 15...
19190 9014	192 36-1 F	for 192 12....
19190 9015	192 58-1 F	for 192 15...
<b>Cable entries</b>		
25610 9000	2561	plastic cable gland M20 x 1,5 (190...)
25600 9000	2560	plastic cable gland M25 x 1,5 (181/182..., 187/188..., 191/192...)
25730 9000	2573	threaded blanking plug M20x1,5 (190...)
25720 9000	2572	threaded blanking plug M25x1,5 (181/182..., 187/188..., 191/192...)
<b>Mounting accessories</b>		
<b>... series 190...</b>		
26000 0004	W 26 P	1 pair wall angle brackets
26000 0002	W 26/30 P	1 pair wall angle brackets 30°
26000 0003	W 26/45 P	1 pair wall angle brackets 45°
<b>... series 190... and 181/182...</b>		
90001 0002	H8 V P	1 pair suspension eyes with bolts, stainless steel
90000 0002	15A P	1 pair ceiling brackets, galvanized steel
90032 0002	15AV P	1 pair ceiling brackets, stainless steel
<b>... series 181/182...</b>		
26000 0005	WD 45P	1 pair ceiling brackets, galvanized steel
26000 0006	WD 45V P	1 pair ceiling brackets, stainless steel
<b>... series 187/188...</b>		
90019 0002	RS 6 P	1 pair ring screw M8
<b>... series 191/192...</b>		
90022 0002	192 Y P	1 pair, Y-cable suspension, adjustable (2-point fixing)
90022 0004	192 YK P	1 pair, Y-chain suspension, adjustable (2-point fixing)
90022 0003	KPS 40	chain pendulum 1m with hook and eyelet for fastening and length compensation (4 pcs. needed per light fitting)

### Note:

When using the carrier rail TRS 2000 the mounting accessories for TRS 2000 EX should be used (see section „Ex-light fittings“).

## Vandal Proof LED Light Fittings Series 140 ...

### Application:

Subways, railway stations, underground stations, car parks, lavatories, schools, sport stadiums, stairways, bus-stops, prisons etc.,

### Design:

**Housing:** high-grade stainless steel, glass pearl blasted visible surfaces, covered cable tray and mounting holes at the back of the housing, high quality foamed silicone gasket.

**Cover:** hinged and removable clear polycarbonate diffuser with glass pearl blasted stainless steel end caps on the front sides, concealed joint with the cover.

**Reflector:** aluminium, white painted.

Easy to remove via keyholes, all electrical components mounted, LED-modules with

additional covers for glare limitation.

**Fasteners:** stainless steel, cover and end caps fixed with the stainless steel housing using safety screws M6 (Thorax Tx30 with pin) counter-sunk in the end caps (special fasteners on request).

**Electrical connection:** 3-pole connection terminal; max. 2.5mm<sup>2</sup>.

**Cable entries:** 2 x Ø20mm with grommets at the back.

**Mounting system:** 4 holes 9 mm Ø, hidden at the back of the housing. Sealing and pressure disks can be found inside the fitting. Please use screws Ø 6mm for mounting.

### Technical data:

**LED:** Line modules 4,000K, CRI > 80, life expectancy L<sub>80</sub> > 50,000h at max. ambient temperature (see notes)

**ECG:** 220-240V, 50/60Hz, overload and short-circuit protection

**Ambient temperature:** -20°C bis +35°C

### Options:

- 6,500K
- painted sheet steel design (only for indoor use)
- for higher ambient temperatures
- special paint finish in any RAL colour
- dimming via DALI-interface (DIMD)
- for connection to central power supply unit (ZB)

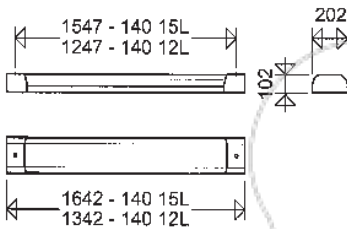
### SCHUCH quality- Your advantage:

- sturdy version made of high-quality stainless steel
- rugged housing, end caps and polycarbonate diffuser due to angular design
- polycarbonate diffuser of high impact strength, IK value acc. to EN 50102 > 2 x IK 10 (è 40 joule min.)
- homogeneous illumination by using frosted covers (for glare limitation), no particular light points visible, comfortable perception of light, brilliant glare limitation
- safe function of the LED even in case of impacts or vibrations
- ECG and LED-modules replaceable by end-user
- future proof by using LED-modules according to Zhaga standard

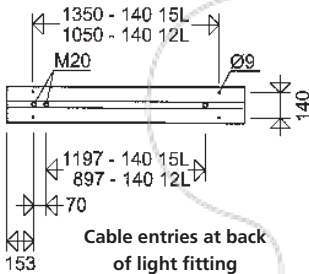
STAINLESS STEEL  
corrosion resistant

>40J

Dustproof/Waterproof  
Light Fittings



Mounting holes at the back  
of light fitting



Cable entries at back  
of light fitting

Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
-------------	------	--------------------------	-----------------------	-----------------------------	-------------------------	----------------------	--------------------------------------

### 140 ...

14005 0003	140 12L22	18	2.460	137	A++	1 x 36W	7,1
14005 0004	140 12L42	32	4.320	135	A++	1 x 58W	7,1
14005 0005	140 15L34	25	3.580	143	A++	2 x 36W	9,2
14005 0006	140 15L60	47	6.350	135	A++	2 x 58W	9,2

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes

### Notes:

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## Accessories / Spare Parts

Article No.	Type	
14011 9000	140 036	Spare glass PC clear with stainless steel and caps, for 140 12L.
14011 9001	140 058	Spare glass PC clear with stainless steel and caps, for 140 15L.
90063 9000	2511	blanking plug M20

## Aluminium Carrier Rails for Continuous Row Installation

### Series TRS 2000... and AL...

#### Application:

For rows of light fittings suspended from the ceiling, allowing an easy installation and assembly.

#### Design:

Aluminium profiled carrier rails  
(AL/TRS 2000)

Lengths: 2, 3 or 5 m. Additional covering strip (TRSA) for series TRS.

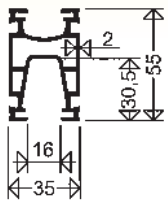
#### Mounting accessories:

For each length of a light fitting only one suspension point is required.

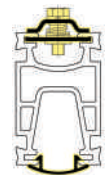
Connection brackets (TRSV) - to be ordered separately - allow joining the individual rails up to any length wanted. The carrier rails can either be mounted directly

to the ceiling by means of the ceiling brackets (183 A / TRSD) or they can be suspended from the ceiling by means of the hook (183 H / TRSS) in combination with the chain (K 16 V) (max. distance of mounting rail elements 2.5m). Perlon pendulums are not suitable for this purpose.

2 or 3 devices (183 L / TRSL) serve for mounting a light fitting to the rail. The suspension devices 183 A / TRSD and 183 H / TRSS as well as the devices 183 L / TRSL are movable in the longitudinal direction of the rails.



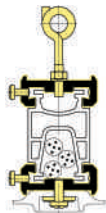
TRS H



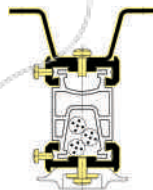
TRS V



TRS A



TRS S



TRS D



TRS L

TRS L

### TRS 2000...

#### aluminium carrier rails

##### SCHUCH quality - Your advantage:

- universal quick-action mounting system for explosion- and weather-proof light fittings.
- easy to install. (Fasten the suspension devices to the light fitting, push the light fitting with its suspension devices into the carrier rail profile - ready.)
- high carrying force thanks to a new profile structure
- possibility to insert the mains cable into the cable channel
- cover strips to protect against dirt deposit.

Article no.	Type	Product	Weight ca. [kg]
90260 0001	TRS 2000 2 M	Alu rail 2 m long	3,03
90260 0002	TRS 2000 3 M	Alu rail 3 m long	4,55
90260 0003	TRS 2000 5 M	Alu rail 5 m long	7,58
90265 0005	TRS A 1	covering strip, 1 m long	0,04
90265 0006	TRS A 2	covering strip, 2 m long	0,07

### Mounting Devices

Article no.	Type	Product
90265 0004	TRS V	device (profile) for rail connection
90265 0002	TRS D	stainless steel ceiling bracket
90022 0001	KP 40	chain 1 m long with 2 eyelets for fastening and length compensation
90265 0001	TRS S	stainless steel swing hook for chain
90265 0003	TRS L	luminaire suspension device, stainless steel
90265 0010	TRS H	stainless steel luminaire mounting, for later installation

**Please note:** For mounting the sheet steel light fittings (such as series 181/182...) please use the mounting accessories of the ex-proof light fittings.

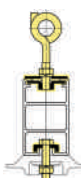
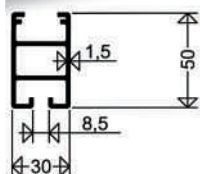
### AL...

#### aluminium carrier rails

Article no.	Type	Product	Weight ca. [kg]
90005 0001	2 M AL	Alu rail 2 m long	1,6
90005 0002	3 M AL	Alu rail 3 m long	2,4
90005 0003	5 M AL	Alu rail 5 m long	3,9

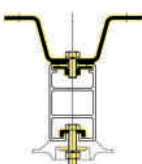
### Mounting Devices

Article no.	Type	Product
90265 0004	TRS V	device for rail connection
90185 0001	183 A	ceiling bracket for ceiling mounting of the carrier rail
90022 0001	KP 40	chain 1 m long with 2 eyelets for fastening and length compensation
90049 0001	183 H	hook for chain pendulum
90050 0001	183 L	luminaire mounting system complete



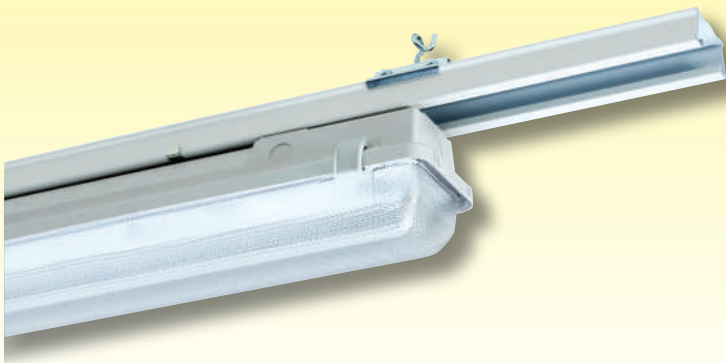
183H

183L



183A

183L



## Sheet steel Carrier Rails for Continuous Row Installation Series TRS 1000

### Applications:

For rows of polyester dust-/waterproof light fittings suspended from the ceiling, allowing an easy installation an assembly.

### Design:

Profile carrier rails made from sheet steel, galvanized and painted in white on the outside

### Lengths:

3065mm (TRS 1000/2) and  
4595mm (TRS 1000/3)

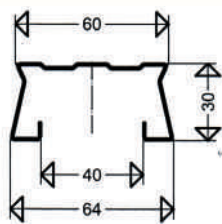
Additional covering strip (TRS 1000 A)  
1538mm

### Mounting accessories:

Connection brackets (TRS 1000 V) – to  
be ordered separately – allows joining the

individual rails up to any length required.

The carrier rails can either be mounted directly to the ceiling by means of the **ceiling brackets** (TRS 1000 D) or they can be suspended from the ceiling by means of **hook** (TRS 1000 S) in combination with **chain** (K 16 V) (max. distance of mounting rail elements 2m). 2 or 3 devices (TRS 1000 L) serve for mounting a light fitting to the rail. The carrier rail can be covered with a covering strip (TRS 1000 A) and they can also be closed at the ends with caps (TRS 1000 E).



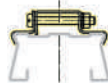
TRS 1000 S



TRS 1000 L



TRS 1000 V



TRS 1000 D



TRS 1000 A



TRS 1000 E

### Note:

Most of our light fittings have got two entries at one end of the housing for looping the mains cable. **Thus, the classical through-wiring system is no longer required in many cases.**

The maximum allowed ambient temperature will be reduced by up to 5°C if Through-Wiring operating current exceeds 8A (5x1,5mm<sup>2</sup>) respectively 10A (5x2,5mm<sup>2</sup>).

## TRS 1000...

### Sheet steel carrier rail systems

Article no.	Type	Product
90261 0001	TRS 1000/2	sheet steel carrier rail 3,065mm long
90261 0002	TRS 1000/3	sheet steel carrier rail 4,595mm long

### Mounting equipment

Article no.	Type	Product
90264 0001	TRS 1000 V	rail connector
90264 0006	TRS 1000 D	ceiling bracket for mounting the carrier rails
90264 0002	TRS 1000 S	rail suspension device with hook for chain
90022 0001	KP 40	chain 1m long with 2 eyelets for length compensation
90264 0008	TRS 1000 L P	luminaire mounting device (1 pair)
90264 0004	TRS 1000 A	covering strip for the rail 1,538mm
90264 0007	TRS 1000 E P	end cap for the rail (1 pair)

## Through-Wiring Systems

One fixed multipole terminal at each end of the housing.

Heat-resistant PVC or silicone cables fixed to the housing with clips.

### Through-wiring systems:

1,5mm<sup>2</sup> up to 10A max.

2,5mm<sup>2</sup> up to max. 16A max.

In case of loads >8A the maximum permissible ambient temperature is reduced by 5°C.

Light fittings with electronic ballasts do have a high inrush current, hence the maximum permissible number of waterproof LED light fittings with through-wiring system per circuit breaker must be observed.

(see <http://www.schuch.de/en/service/photometric-files>)

**For light fittings in continuous row installation we do recommend factory-fitted through-wiring systems.**

**For retrofitting our retrofit kits must be used.**

## Through-Wiring Systems Installed in the SCHUCH Factory

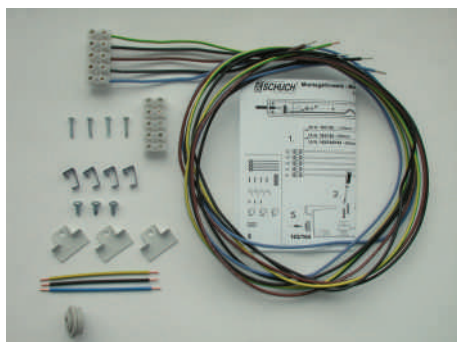
If through-wiring systems are wanted, we supply our dustproof/waterproof light fittings with the following standard through-wiring systems:

Ballasts	ECG
Through-wiring system	5 x 1,5mm <sup>2</sup> PVC

Silicone through-wiring systems for other cable cross sections or number of poles (e.g. 3x 1,5mm<sup>2</sup>) are available on request.

## Through-wiring systems for subsequent installation:

Article no.	Type	Product
<b>Universal retrofit kits, suitable for ... 12L.. and ... 15L..</b>		
11831 0013	DV/NS P 5 x 1,5	5 x 1,5mm <sup>2</sup> PVC, 105°C
11831 0022	DV/NS P 5 x 2,5	5 x 2,5mm <sup>2</sup> PVC, 105°C
11831 0014	DV/NS S 5 x 1,5	5 x 1,5mm <sup>2</sup> Silicone, 150°C
11831 0024	DV/NS S 5 x 2,5	5 x 2,5mm <sup>2</sup> Silicone, 150°C





# High Bay Light Fittings

## Perfect solutions for various requirements

The company has produced light fittings for applications in workshops, industrial, processing and storage areas even in the beginning of its history. When high-pressure lamps appeared, this product line had become one of the main segments in the whole range. As in other manufacturing areas, SCHUCH design engineers covered more and more application fields with severe operating conditions. As a result, along with standard series, many new special versions have been developed over the time. Such special versions have turned into industry solutions due to which SCHUCH is known far beyond Germany by today.

Even in the most severe conditions, such as chlorine electrolysis plants, galvanizing plants or compost systems, SCHUCH light fittings demonstrate reliable operation and withstand the most aggressive environments.

New industrial LED light fittings feature, in particular, excellent temperature control, which is the basic condition of a long service life and one of the most important quality factors for a LED light fitting.

### STANDARD OR CUSTOMIZED SOLUTIONS? SCHUCH OFFERS BOTH.

#### 1954

Production of the first industrial reflector-light fitting for high-pressure mercury lamps

#### 1975

Production of the first industrial high bay light fitting made of fiberglass-reinforced polyester for application in very aggressive environment, such as in galvanizing plants, compost systems, steeping plants, etc.

#### 1998

Application of inductive lamp systems with a minimum service life of 60,000 hours. This allowed using high bay light fittings in high-current and strong-magnetic-field applications, such as chlorine electrolysis plants.

#### 2001

Introduction of the first high bay light fitting having a specific triangular shape, which is designed for dust-loaded and polluted environments with a high ambient temperature and high fire hazard.

#### 2003

The range of high bay light fittings has been extended significantly by adding special versions for food industry, blast rooms, applications with high ambient temperatures up to +90°C and many others.



# High Bay Floodlights

## LED-Technology

Product	Series	Page
<b>High Bay Floodlights</b>		
<i>with 2 point mounting</i>		
<b>DUEVO MID</b>	<b>3301/3302...</b>	72
<b>DUEVO XL MID</b>	<b>3305...</b>	75
<i>with 1 point mounting</i>		
<b>TRIANO Generation 2</b>	<b>3401/3402... G2</b>	77
<b>TRIANO L</b>	<b>3403...</b>	79
<b>TRIANO XL MID</b>	<b>3405...</b>	81

### LED-TECHNOLOGY

**2008**

Introduction of first LED reflector light fittings.

**2013**

Production of the first high bay light fitting DUEVO Series, which has been designed especially for LED technology and which operates at an ambient temperature of +60°C max.

**2015**

TRIANO Series for 1-point suspension mounting has been added into the range of high bay LED light fittings.

**2016**

Production of DUEVO XL high bay LED light fitting with luminous fluxes of up to 62,000lm.

**2017**

Launch of the highly efficient 2. Generation TRIANO and TRIANO XL series with up to 50,000 lumen.

**2018**

Relaunch of our High Bay Floodlight series DUEVO with highly efficient Midpower LED.  
Completion of our High Bay series TRIANO with TRIANO L and TRIANO XL MID

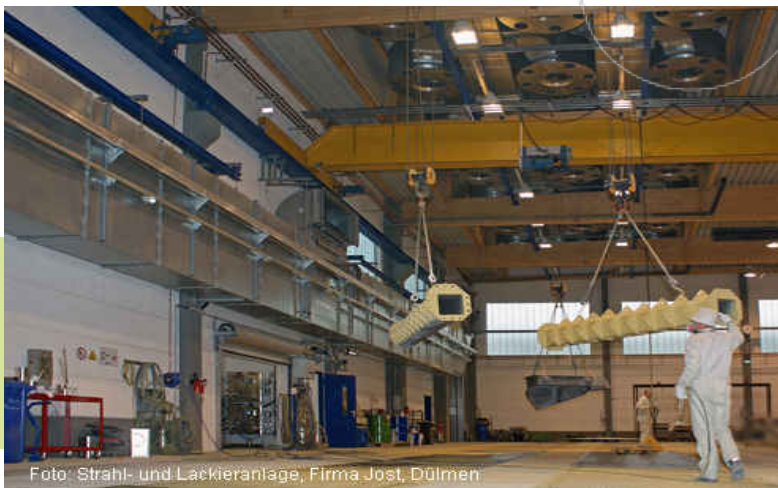
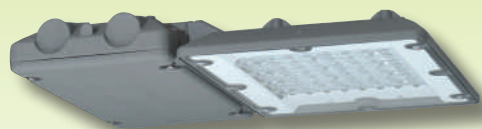
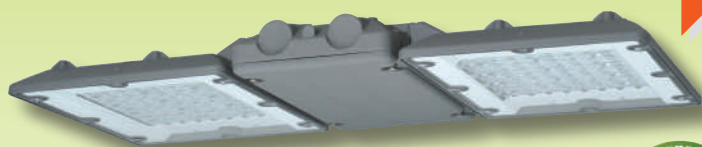


Foto: Strahl- und Lackieranlage, Firma Jost, Dülmen

NEW

## DUEVO MID LED High Bay Floodlight Series 3301/3302...



### Application:

Production areas and warehouses, cool storage facilities, walkways in shelf areas, driveways etc.

### Design:

Two versions are available: 1 or 2 LED wings.

**Housing:** Die-cast aluminum, DB 702N (mica-iron paint). **Housing** with LED modules, optics behind tempered safety glass (IK08). **ECG housing** with integrated

electronic control gear, prewired on terminals.

**Light distribution:** Without optic wide beam, with optics wide (B), narrow-wide (TB) or narrow beam (T), respectively oval optics (TO) for illumination of aisles in rack areas.

**Entries:** 1 gland and 1 blind plug M25 x 1,5.

**Mounting:** see Accessories.

### Technical Data:

**LED module:** Complying Zhaga, 4,000K, CRI > 80, lifetime L<sub>70</sub> > 100,000h max. ambient temperature (see notes).

**ECG:** 220-240V, 50-60Hz, overvoltage protection 4kV, excess temperature protection, overload and short circuit protection.

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

**Dimm-interface:** For dim light operation (DIMD versions)

**Ambient temperature:** -20°C up to +50°C / +60°C (see article tables).

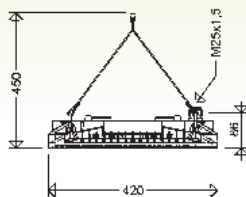
### Options:

- 5,000K (light colour 850)
- dimmable version „Corridor Mode“ (DIMC)
- light output reduction (LR) per 230V control line
- uniform luminous flux option (CL) to keep the light output on same level for the whole life cycle
- PMMA cover frosted (F) for glare limitation
- for low ambient temperatures down to -40°C
- for high ambient temperatures up to +70°C
- version with additional threads for swivel arm brackets (swivel range 0° - 45°)
- version with additional threads for ceiling mounting brackets 3301/3302 D
- „T“-marking for rooms with higher fire risk
- for connection to group or central battery systems (ZB)
- ball sports proof version
- 3/5-pole connecting (plug and play) plug for electrical connection without accessing the internal terminal block

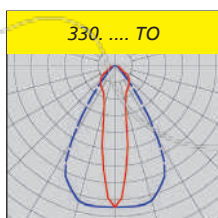
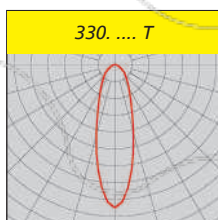
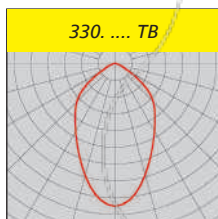
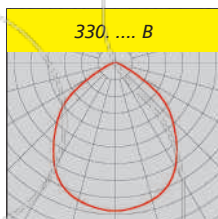
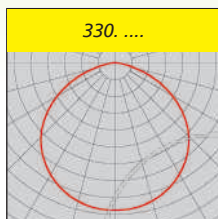
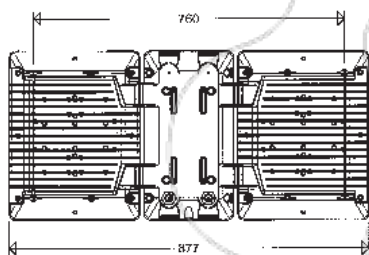
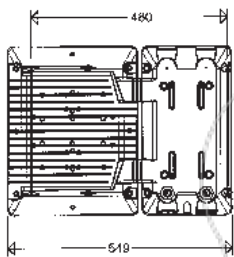
### SCHUCH Quality - your advantage:

- high system lifetime of up to 100,000h
- highest efficiency
- high quality ECG with overvoltage, overload, short-circuit and excess temperature protection
- optimized thermo management due to direct mounting of the LED modules to the housing and separate housings for ECG- and LED-modules, huge heat sink with excellent heat dissipation
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping. No dark zones if any single LED would fail. The uniformity of the illumination is kept.
- colour rendering index CRI > 80
- variable electrical installation methods due to max. 8 cable entries (see options)
- future proof by using standardized LED-modules (Zhaga)

3301...



3302...



### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Light output [lm/W]	Wide beam	Narrow wide beam	Narrow beam	Dimmable	Energy efficiency class	Substitute for *	Weight [kg] (without packing material)
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## 3301/3302...



... for ambient temperatures up to +50°C

### 1 LED wing

33010 0001	<b>3301 L210</b>	1	135	20.590	153	•				A++	HIE 400	8,9
33010 0002	<b>3301 L210B</b>	1	135	20.210	150	•				A++	HIE 400	9,2
33010 0013	<b>3301 L210TB</b>	1	135	20.320	151		•			A++	HIE 400	9,2
33010 0003	<b>3301 L210T</b>	1	135	19.720	146			•		A++	HIE 400	9,2
33010 0014	<b>3301 L210TO</b>	1	135	20.170	149			•		A++	HIE 400	9,2
33010 0200	<b>3301 L210 DIMD</b>	1	135	20.590	153	•			•	A++	HIE 400	8,9
33010 0201	<b>3301 L210B DIMD</b>	1	135	20.210	150	•			•	A++	HIE 400	9,2
33010 0212	<b>3301 L210TB DIMD</b>	1	135	20.320	151		•		•	A++	HIE 400	9,2
33010 0202	<b>3301 L210T DIMD</b>	1	135	19.720	146			•	•	A++	HIE 400	9,2
33010 0213	<b>3301 L210TO DIMD</b>	1	135	20.170	149			•	•	A++	HIE 400	9,2

### 2 LED wings

33020 0001	<b>3302 L420</b>	2	270	41.180	153	•				A++	2 x HIE 400	14,5
33020 0002	<b>3302 L420B</b>	2	270	40.410	150	•				A++	2 x HIE 400	14,6
33020 0013	<b>3302 L420TB</b>	2	270	40.640	151		•			A++	2 x HIE 400	14,6
33020 0003	<b>3302 L420T</b>	2	270	39.440	146			•		A++	2 x HIE 400	14,6
33020 0014	<b>3302 L420TO</b>	2	270	40.340	149			•		A++	2 x HIE 400	14,6
33020 0200	<b>3302 L420 DIMD</b>	2	270	41.180	153	•			•	A++	2 x HIE 400	14,5
33020 0201	<b>3302 L420B DIMD</b>	2	270	40.410	150	•			•	A++	2 x HIE 400	14,6
33020 0212	<b>3302 L420TB DIMD</b>	2	270	40.640	151		•		•	A++	2 x HIE 400	14,6
33020 0202	<b>3302 L420T DIMD</b>	2	270	39.440	146			•	•	A++	2 x HIE 400	14,6
33020 0213	<b>3302 L420TO DIMD</b>	2	270	40.340	149			•	•	A++	2 x HIE 400	14,6

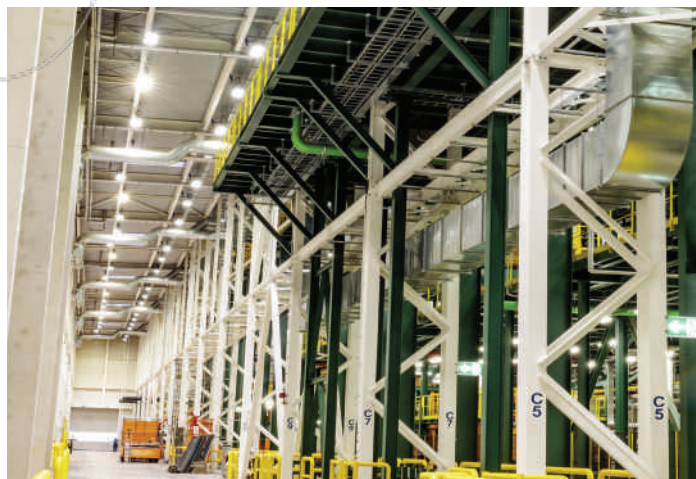
... for ambient temperatures up to +60°C

### 1 LED wing

33010 0004	<b>3301 L110 H60</b>	1	67	10.950	163	•				A++	HME 250	8,9
33010 0005	<b>3301 L160 H60</b>	1	96	15.220	159	•				A++	HIT 250/HME 400	8,9
33010 0006	<b>3301 L110B H60</b>	1	67	10.750	160	•				A++	HME 250	9,2
33010 0007	<b>3301 L160B H60</b>	1	96	14.940	156	•				A++	HIT 250/HME 400	9,2
33010 0015	<b>3301 L110TB H60</b>	1	67	10.810	161		•			A++	HME 250	9,2
33010 0016	<b>3301 L160TB H60</b>	1	96	15.020	156		•			A++	HIT 250/HME 400	9,2
33010 0008	<b>3301 L110T H60</b>	1	67	10.490	157			•		A++	HME 250	9,2
33010 0009	<b>3301 L160T H60</b>	1	96	14.580	152			•		A++	HIT 250/HME 400	9,2
33010 0203	<b>3301 L110 DIMD H60</b>	1	67	10.950	163	•			•	A++	HME 250	8,9
33010 0204	<b>3301 L160 DIMD H60</b>	1	96	15.220	159	•			•	A++	HIT 250/HME 400	8,9
33010 0205	<b>3301 L110B DIMD H60</b>	1	67	10.750	160	•			•	A++	HME 250	9,2
33010 0206	<b>3301 L160B DIMD H60</b>	1	96	14.940	156	•			•	A++	HIT 250/HME 400	9,2
33010 0214	<b>3301 L110TB DIMD H60</b>	1	67	10.810	161		•		•	A++	HME 250	9,2
33010 0215	<b>3301 L160TB DIMD H60</b>	1	96	15.020	156		•		•	A++	HIT 250/HME 400	9,2
33010 0207	<b>3301 L110T DIMD H60</b>	1	67	10.490	157			•	•	A++	HME 250	9,2
33010 0208	<b>3301 L160T DIMD H60</b>	1	96	14.580	152			•	•	A++	HIT 250/HME 400	9,2

\* This date is a rough guideline. In individual cases a lighting calculation is required.

\*\* see notes



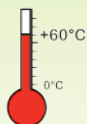
High Bay  
Floodlights

Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Light output [lm/W]	Wide beam	Narrow wide beam	Narrow beam	Dimmable	Energy efficiency class	Substitute for *	Weight [kg] (without packing material)
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### ... for ambient temperatures up to +60°C

#### 2 LED wings

33020 0004	<b>3302 L220 H60</b>	2	134	21.910	164	•				A++	HIE 400	14,5
33020 0005	<b>3302 L320 H60</b>	2	192	30.440	159	•				A++	HIT 400	14,5
33020 0006	<b>3302 L220B H60</b>	2	134	21.500	160	•				A++	HIE 400	14,6
33020 0007	<b>3302 L320B H60</b>	2	192	29.870	156	•				A++	HIT 400	14,6
33020 0015	<b>3302 L220TB H60</b>	2	134	21.620	161		•			A++	HIE 400	14,6
33020 0016	<b>3302 L320TB H60</b>	2	192	30.040	156		•			A++	HIT 400	14,6
33020 0008	<b>3302 L220T H60</b>	2	134	20.980	157			•		A++	HIE 400	14,6
33020 0009	<b>3302 L320T H60</b>	2	192	29.160	152			•		A++	HIT 400	14,6
33020 0203	<b>3302 L220 DIMD H60</b>	2	134	21.910	164	•			•	A++	HIE 400	14,5
33020 0204	<b>3302 L320 DIMD H60</b>	2	192	30.440	159	•			•	A++	HIT 400	14,5
33020 0205	<b>3302 L220B DIMD H60</b>	2	134	21.500	160	•			•	A++	HIE 400	14,6
33020 0206	<b>3302 L320B DIMD H60</b>	2	192	29.870	156	•			•	A++	HIT 400	14,6
33020 0214	<b>3302 L220TB DIMD H60</b>	2	134	21.620	161		•		•	A++	HIE 400	14,6
33020 0215	<b>3302 L320TB DIMD H60</b>	2	192	30.040	156		•		•	A++	HIT 400	14,6
33020 0207	<b>3302 L220T DIMD H60</b>	2	134	20.980	157			•	•	A++	HIE 400	14,6
33020 0208	<b>3302 L320T DIMD H60</b>	2	192	29.160	152			•	•	A++	HIT 400	14,6



#### IFS Food/BRC/VDMA/HACCP

SCHUCH Light Fittings designed for food and beverage industry applications are in accordance with IFS Food/BRC/VDMA standards. They can be operated without restrictions in operations that must fulfill the HACCP Concept.

### 3301/3302... IFS



#### for applications in food industry areas

##### Applications:

Production halls in the food industry, locations which come under the requirements of the IFS Food (International Featured Standard, Food), BRC or HACCP, e.g. manufacture of food packaging.

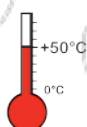
##### Design:

With clear PC cover instead of the flat safety glass.

### ... for ambient temperatures up to +50°C

#### 1 LED wing

33010 0010	<b>3301 L210 IFS</b>	1	135	20.430	151	•				A++	HIE 400	8,9
33010 0011	<b>3301 L210B IFS</b>	1	135	20.010	148	•				A++	HIE 400	9,2
33010 0017	<b>3301 L210TB IFS</b>	1	135	20.140	149		•			A++	HIE 400	9,2
33010 0012	<b>3301 L210T IFS</b>	1	135	19.500	144			•		A++	HIE 400	9,2
33010 0209	<b>3301 L210 DIMD IFS</b>	1	135	20.430	151	•			•	A++	HIE 400	8,9
33010 0210	<b>3301 L210B DIMD IFS</b>	1	135	20.010	148	•			•	A++	HIE 400	9,2
33010 0216	<b>3301 L210TB DIMD IFS</b>	1	135	20.140	149		•		•	A++	HIE 400	9,2
33010 0211	<b>3301 L210T DIMD IFS</b>	1	135	19.500	144			•	•	A++	HIE 400	9,2



Also available for ambient temperatures up to +60°C

#### 2 LED wings

33020 0010	<b>3302 L420 IFS</b>	2	270	40.860	151	•				A++	2 x HIE 400	14,5
33020 0011	<b>3302 L420B IFS</b>	2	270	40.020	148	•				A++	2 x HIE 400	14,6
33020 0017	<b>3302 L420TB IFS</b>	2	270	40.280	149		•			A++	2 x HIE 400	14,6
33020 0012	<b>3302 L420T IFS</b>	2	270	39.000	144			•		A++	2 x HIE 400	14,6
33020 0209	<b>3302 L420 DIMD IFS</b>	2	270	40.860	151	•			•	A++	2 x HIE 400	14,5
33020 0210	<b>3302 L420B DIMD IFS</b>	2	270	40.020	148	•			•	A++	2 x HIE 400	14,6
33020 0216	<b>3302 L420TB DIMD IFS</b>	2	270	40.280	149		•		•	A++	2 x HIE 400	14,6
33020 0211	<b>3302 L420T DIMD IFS</b>	2	270	39.000	144			•	•	A++	2 x HIE 400	14,6

\* This date is a rough guideline. In individual cases a lighting calculation is required.

\*\* see notes

## Accessories / Spare Parts

Type	Article no.	
33001 9001	<b>3301/010</b>	spare safety glass (for 3302... 2 glasses per fitting necessary)
33001 9006	<b>3301/010 IFS</b>	PC cover for use in the food industry (IFS) (for 3302... 2 covers per fitting necessary)
33001 9010	<b>3301/010 F</b>	PMMA-cover, frosted for glare limitation (for 3302... 2 covers per fitting necessary)
25600 9000	<b>2560</b>	plastic gland M25x1,5
25720 9000	<b>2572</b>	plastic plug M25x1,5
33001 9004	<b>3301/3302 Y P</b>	1 pair of Y-ropes, (2-point-mounting)
33001 9002	<b>3301/3302 D</b>	1 pair of brackets for direct ceiling mounting
33001 9008	<b>3301 D BS</b>	1 pair of ceiling mountings, ball sports proof for series 3301 <sup>1)</sup>
33001 9009	<b>3302 D BS</b>	1 pair of ceiling mountings, ball sports proof for series 3302 <sup>1)</sup>
33001 9003	<b>3301 W</b>	1 swivel arm, adjustable, for wall mounting series 3301... <sup>1)</sup>
33001 9007	<b>3302 W</b>	1 swivel arm, adjustable, for wall mounting series 3302... <sup>1)</sup>

1) For mounting these brackets additional mounting holes are required on the luminaire. Please indicate way of mounting when ordering the luminaire.

NEW

# DUEVO XL MID LED High Bay Floodlight Series 3305...

## Application:

Production areas and warehouses, maintenance and assembly shops, cool storage facilities, walkways in rack areas, hardware stores etc.

## Design:

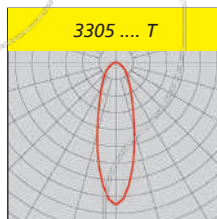
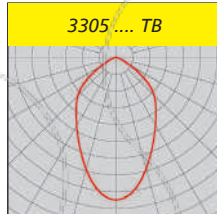
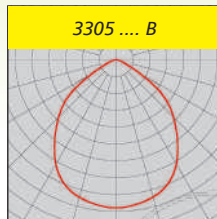
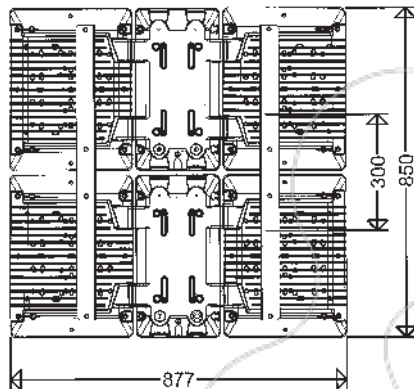
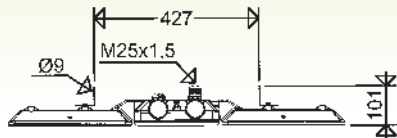
**Housing:** Die-cast aluminum, DB 702N (mica-iron paint). **4 housings** with LED module, optic behind tempered safety glass (IK08). **2 ECG housings** with integ-

rated electronic control gear, prewired on terminals.

**Light distribution:** With optics wide (B), Narrow-wide (TB) or narrow beam (T).

**Entries:** 1 gland and 1 blind plug M25 x 1,5.

**Mounting:** see Accessories.



## Technical Data:

**LED module:** Midpower-LED, 4,000K, CRI > 80, lifetime L<sub>70</sub> > 100,000h max. ambient temperature (see notes), complying Zhaga.

**ECG:** 220-240V, 50-60Hz, overvoltage protection 4kV, excess temperature protection, overload and short circuit protection.

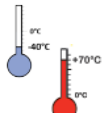
**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

**Dimm-interface:** For dim light operation (DIMD versions)

**Ambient temperature:** -20°C up to +50°C / +60°C (see article tables).

## Options:

- 5,000K (light colour 850)
- dimmable version „Corridor Mode“ (DIMC)
- light output reduction (LR) per 230V control line
- uniform luminous flux option (CL) to keep the light output on same level for the whole life cycle
- PMMA cover frosted (F) for glare limitation
- for low ambient temperatures down to -40°C
- for high ambient temperatures up to +70°C
- „V“-marking for rooms with higher fire risk
- 3/5-pole connecting (plug and play) plug for electrical connection without accessing the internal terminal block



## SCHUCH Quality - your advantage:

- high system lifetime of up to 100.000h
- efficient substitute for conventional high pressure lamps up to HME 1000W or 2 x HIT 400W
- high quality ECG with overvoltage, overload, short-circuit and excess temperature protection
- optimized thermo management due to direct mounting of the LED modules to the housing and separate housings for ECG- and LED-modules, huge heat sink with excellent heat dissipation
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping. No dark zones if any single LED would fail. The uniformity of the illumination is kept.
- colour rendering index CRI > 80
- variable electrical installation methods due to max. 8 cable entries (looping in/out at one end on demand)
- future proof by using standardized LED-modules (Zhaga)

## Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Light output [lm/W]	Wide beam	Narrow beam	Dimmable	Energy efficiency class	Substitute for *	Weight [kg] (without packing material)
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## 3305...



### ... for ambient temperatures up to +50°C

33050 0050	<b>3305 L840B</b>	4	540	80.830	150	•			A++	1 x HME 1000 / 2 x HIT 400	30,3
33050 0058	<b>3305 L840TB</b>	4	540	81.280	151	•			A++	1 x HME 1000 / 2 x HIT 400	30,3
33050 0051	<b>3305 L840T</b>	4	540	78.890	146		•		A++	1 x HME 1000 / 2 x HIT 400	30,3
33050 0200	<b>3305 L840B DIMD</b>	4	540	80.830	150	•		•	A++	1 x HME 1000 / 2 x HIT 400	30,3
33050 0208	<b>3305 L840TB DIMD</b>	4	540	81.280	151	•		•	A++	1 x HME 1000 / 2 x HIT 400	30,3
33050 0201	<b>3305 L840T DIMD</b>	4	540	78.890	146		•	•	A++	1 x HME 1000 / 2 x HIT 400	30,3

### ... for ambient temperatures up to +60°C

33050 0052	<b>3305 L440B H60</b>	4	268	43.000	160	•			A++	2 x HIT 250/HME 400	30,3
33050 0053	<b>3305 L640B H60</b>	4	384	59.750	156	•			A++	1 x HME 1000 / 2 x HIT 400	30,3
33050 0059	<b>3305 L440TB H60</b>	4	268	43.240	161	•			A++	2 x HIT 250/HME 400	30,3
33050 0060	<b>3305 L640TB H60</b>	4	384	60.090	156	•			A++	1 x HME 1000 / 2 x HIT 400	30,3
33050 0054	<b>3305 L440T H60</b>	4	268	41.960	157		•		A++	2 x HIE 400	30,3
33050 0055	<b>3305 L640T H60</b>	4	384	58.320	152		•		A++	1 x HME 1000 / 2 x HIT 400	30,3
33050 0202	<b>3305 L440B DIMD H60</b>	4	268	43.000	160	•		•	A++	2 x HIT 250/HME 400	30,3
33050 0203	<b>3305 L640B DIMD H60</b>	4	384	59.750	156	•		•	A++	1 x HME 1000 / 2 x HIT 400	30,3
33050 0209	<b>3305 L440TB DIMD H60</b>	4	268	43.240	161	•		•	A++	2 x HIT 250/HME 400	30,3
33050 0210	<b>3305 L640TB DIMD H60</b>	4	384	60.090	156	•		•	A++	1 x HME 1000 / 2 x HIT 400	30,3
33050 0204	<b>3305 L440T DIMD H60</b>	4	268	41.960	157		•	•	A++	2 x HIT 250/HME 400	30,3
33050 0205	<b>3305 L640T DIMD H60</b>	4	384	58.320	152		•	•	A++	1 x HME 1000 / 2 x HIT 400	30,3

\* This date is a rough guideline. In individual cases a lighting calculation is required.

\*\* see notes

## 3305... IFS



### for applications in food industry areas

#### Applications:

Production halls in the food industry, locations which come under the requirements of the IFS Food (International Featured Standard, Food), BRC, or HACCP, e.g. manufacture of food packaging.

#### Design:

With clear PC cover instead of the flat safety glass.

### ... for ambient temperatures up to +50°C

33050 0056	<b>3305 L840B IFS</b>	4	540	80.040	148	•			A++	1 x HME 1000 / 2 x HIT 400	26,7
33050 0061	<b>3305 L840TB IFS</b>	4	540	80.560	149	•			A++	1 x HME 1000 / 2 x HIT 400	26,7
33050 0057	<b>3305 L840T IFS</b>	4	540	78.010	144		•		A++	1 x HME 1000 / 2 x HIT 400	26,7
33050 0206	<b>3305 L840B DIMD IFS</b>	4	540	80.040	148	•		•	A++	1 x HME 1000 / 2 x HIT 400	26,7
33050 0211	<b>3305 L840TB DIMD IFS</b>	4	540	80.560	149	•		•	A++	1 x HME 1000 / 2 x HIT 400	26,7
33050 0207	<b>3305 L840T DIMD IFS</b>	4	540	78.010	144		•	•	A++	1 x HME 1000 / 2 x HIT 400	26,7

\* This date is a rough guideline. In individual cases a lighting calculation is required.

\*\* see notes

## Accessories / Spare Parts

Type	Article no.	
33001 9001	<b>3301/010</b>	spare safety glass 4 glasses per fitting necessary
33001 9006	<b>3301/010 IFS</b>	PC cover for use in the food industry (IFS) 4 glasses per fitting necessary
33001 9010	<b>3301/010 F</b>	PMMA-cover, frosted for glare limitation 4 glasses per fitting necessary
25600 9000	<b>2560</b>	plastic gland M25x1,5
25720 9000	<b>2572</b>	plastic plug M25x1,5
33001 9012	<b>3305 Y P</b>	1 pair of Y-ropes, (2-point-mounting)

# TRIANO 2<sup>nd</sup> Generation

## LED High Bay

### Series 3401/3402... G2

#### Application:

Production areas and warehouses, maintenance and assembly shops, cool storage facilities, walkways in rack areas, hardware stores etc.

#### Design:

**LED-housing:** Robust three-part cast aluminium housing with cooling fins, LED-modules and flat safety glasses (IK09), versions with PC-optics (B or TB) without safety glass.

**ECG-housing 3401 ...:** Cast aluminium

**ECG-housing 3402...:** Extruded aluminium with cooling fins. All case parts powder coated in DB702N (mica-iron).

**Light distribution:** Without optic wide beam, with optics wide (B) or narrow-wide (TB) beam.

**Connection:** Preinstalled 3-pole (DIMD 5-pole) plug-type connector, plug mounted to the housing, socket included.

**Mounting:** 1-point suspension, eyelet included.

#### Technical Data:

**LED module:** 5,000K, CRI > 80, lifetime L<sub>80</sub> > 100,000h at 25°C ambient temperature, lifetime L<sub>70</sub> > 70,000h at max. ambient temperature (see notes).

**ECG:** 220-240V, 50-60Hz, surge voltage resistance 4kV, overvoltage-, overload and short circuit protection.

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

**Dimm interface:** DALI (DIMD versions)


**Ambient temperature:** -20°C up to see article tables

#### Options:

- 4,000K (light-colour 840)
- **light output reduction (LR)** per 230V control line
- **uniform luminous flux option (CL)** to keep the light output on same level for the whole life cycle
- for connection to **group or central battery systems (ZB)**
- PC cover for applications in food industry

ry areas (IFS Food)

- light distribution narrow-wide (TB) beam

- -sign for locations with increased fire risk (D)

- silicone free

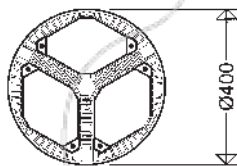
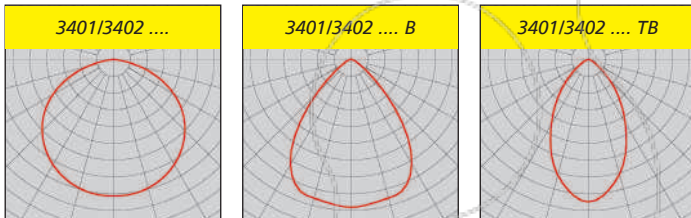
- for high ambient temperatures to +70°C



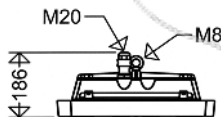
#### SCHUCH Quality - your advantage:

- fast and easy mounting and commissioning due to 1-point suspension and plug-in connection (Plug & Play)
- optimized thermal management due to segmentation of the LED modules and direct mounting to the housing. Huge heat sink, excellent heat dissipation, excellent convection
- high expectancy of life
- highest efficiency
- colour reproduction CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.

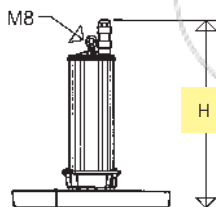
High Bay Floodlights



3401 L... G2



3402 L... G2



Series	H [mm]
3402 L180 DIMD	590
3402 L250	510
3402 L250 DIMD	510

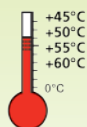
#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Quantity of ECG	Power consumption [W] *	Luminous flux [lm] *	Light output [lm/W]	Dimmable	Tmax [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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## 3401/3402... G2



34010 0100	<b>3401 L120 G2</b>	1	84	12.710	151	55	A++	HME250	6,3
34010 0101	<b>3401 L180 G2</b>	1	123	19.040	155	50	A++	HIT250/HME400/HIE 400 (HI-VG)	6,3
34010 0400	<b>3402 L250 G2</b>	3	198	27.790	140	45	A++	HIE400 (HS-VG)/HIT400	8,1
34010 0102	<b>3401 L120 G2 DIMD</b>	1	84	12.710	151	• 55	A++	HME250	6,3
34010 0401	<b>3402 L180 G2 DIMD</b>	1	123	19.040	155	• 60	A++	HIT250/HME400/HIE 400 (HI-VG)	8,2
34010 0402	<b>3402 L250 G2 DIMD</b>	3	198	27.790	140	• 45	A++	HIE400 (HS-VG)/HIT400	8,1

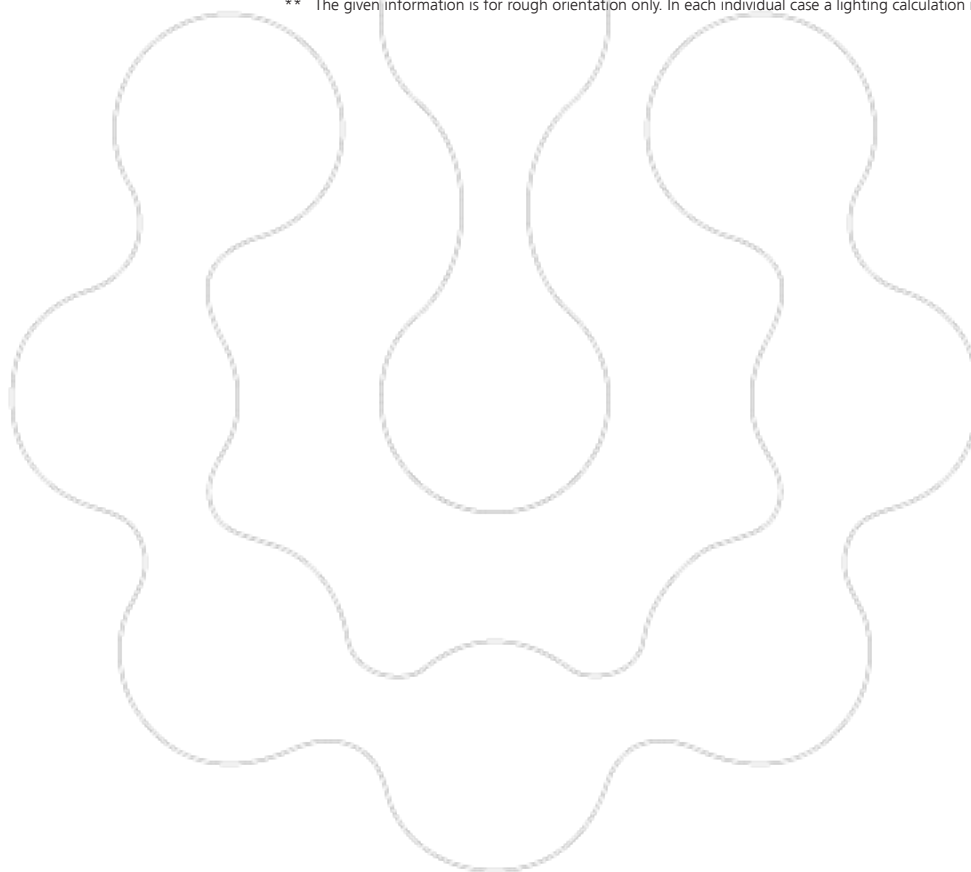
**NEW**

### ... with optic wide- (B) or narrow-wide beam (TB)

34010 0112	<b>3401 L180B G2</b>	1	123	19.340	157	50	A++	HIT250/HME400/HIE 400 (HI-VG)	6,1
34010 0111	<b>3401 L180TB G2</b>	1	123	19.340	157	50	A++	HIT250/HME400/HIE 400 (HI-VG)	6,1
34010 0416	<b>3402 L250B G2</b>	3	198	28.220	143	45	A++	HIE400 (HS-VG)/HIT400	7,9
34010 0415	<b>3402 L250TB G2</b>	3	198	28.220	143	45	A++	HIE400 (HS-VG)/HIT400	7,9
34010 0414	<b>3402 L180B G2 DIMD</b>	1	123	19.340	157	• 60	A++	HIT250/HME400/HIE 400 (HI-VG)	8,0
34010 0413	<b>3402 L180TB G2 DIMD</b>	1	123	19.340	157	• 60	A++	HIT250/HME400/HIE 400 (HI-VG)	8,0
34010 0417	<b>3402 L250B G2 DIMD</b>	3	198	28.220	143	• 45	A++	HIE400 (HS-VG)/HIT400	7,9
34010 0412	<b>3402 L250TB G2 DIMD</b>	3	198	28.220	143	• 45	A++	HIE400 (HS-VG)/HIT400	7,9

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)



## Accessories / Spare Parts

Type	Article no.	
34011 9001	<b>3401/010</b>	spare safety glass, for BR 3401/3402... (3 glasses per fitting necessary)
34011 9004	<b>3401/012 B</b>	spare cover PC, wide beam for BR 3401/3402... B 3 (3 glasses per fitting necessary)
34011 9005	<b>3401/012 TB</b>	spare cover PC, narrow-wide beam for BR 3401/3402... TB (3 glasses per fitting necessary)
34011 9002	<b>3401/010 IFS</b>	PC cover, for BR 3401/3402... IFS (3 glasses per fitting necessary)

NEW

# TRIANO L LED High Bay Series 3403...



## Application:

Production areas and warehouses, maintenance and assembly shops, cool storage facilities, walkways in rack areas, hardware stores etc.

## Design:

**LED-housing:** Robust four-part cast aluminium housing with cooling fins, LED-modules and flat safety glasses (IK09), versions with PC-optics (B or TB) without safety glass.

**ECG-housing:** Extruded aluminium with cooling fins. All case parts powder coated in DB702N (mica-iron).

**Light distribution:** Without optics wide beam, with optics wide (B) or narrow-wide beam (TB).

**Connection:** Preinstalled 3-pole (DIMD 5-pole) plug-type connector, plug mounted to the housing, socket included.

**Mounting:** 1-point suspension, eyelet included.

## Technical Data:

**LED module:** 5,000K, CRI > 80, lifetime L<sub>80</sub> > 100,000h at 25°C ambient temperature, lifetime L<sub>70</sub> > 70,000h at max. ambient temperature (see notes).

**ECG:** 220-240V, 50-60Hz, surge voltage resistance 4kV, overvoltage-, overload and short circuit protection.


**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

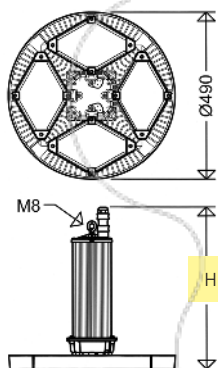
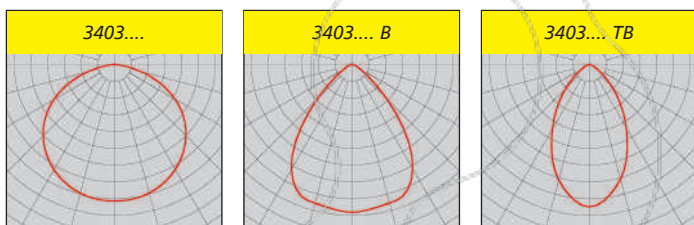
**Dimm interface:** DALI (DIMD versions)

**Ambient temperature:** -20°C up to see article tables

## Options:

- 4,000K (light-colour 840)
- light output reduction (LR) per 230V control line
- uniform luminous flux option (CL) to keep the light output on same level for the whole life cycle
- for connection to group or central battery systems (ZB)
- PC cover for applications in food industry areas (IFS Food)

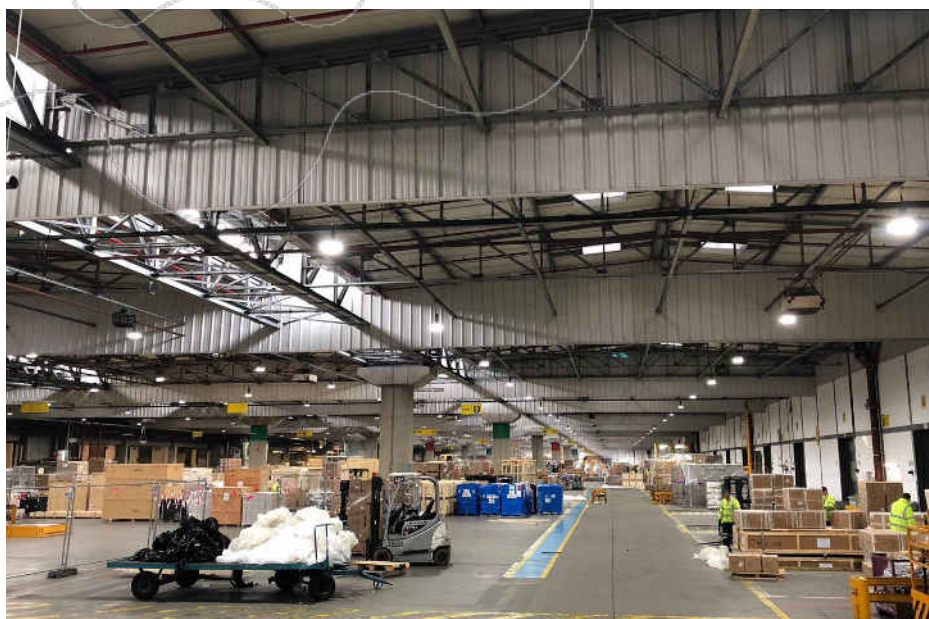
- light distribution narrow-wide (TB) beam.
- -sign for locations with increased fire risk (D)
- silicone free
- for high ambient temperatures to +70°C



Series	H [mm]
3403 ...	510
3403 L380.. DIMD	590

## SCHUCH Quality - your advantage:

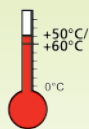
- fast and easy mounting and commissioning due to 1-point suspension and plug-in connection (Plug & Play)
- optimized thermal management due to segmentation of the LED modules and direct mounting to the housing. Huge heat sink, excellent heat dissipation, excellent convection
- high expectancy of life
- highest efficiency > 100,000h
- colour reproduction Ra > 80, according to the workplace guide lines suitable for nearly all plant locations
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.



## Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Quantity of ECG	Power consumption [W] *	Luminous flux [lm] *	Light output [lm/W]	Dimmable	Tmax [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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## 3403...



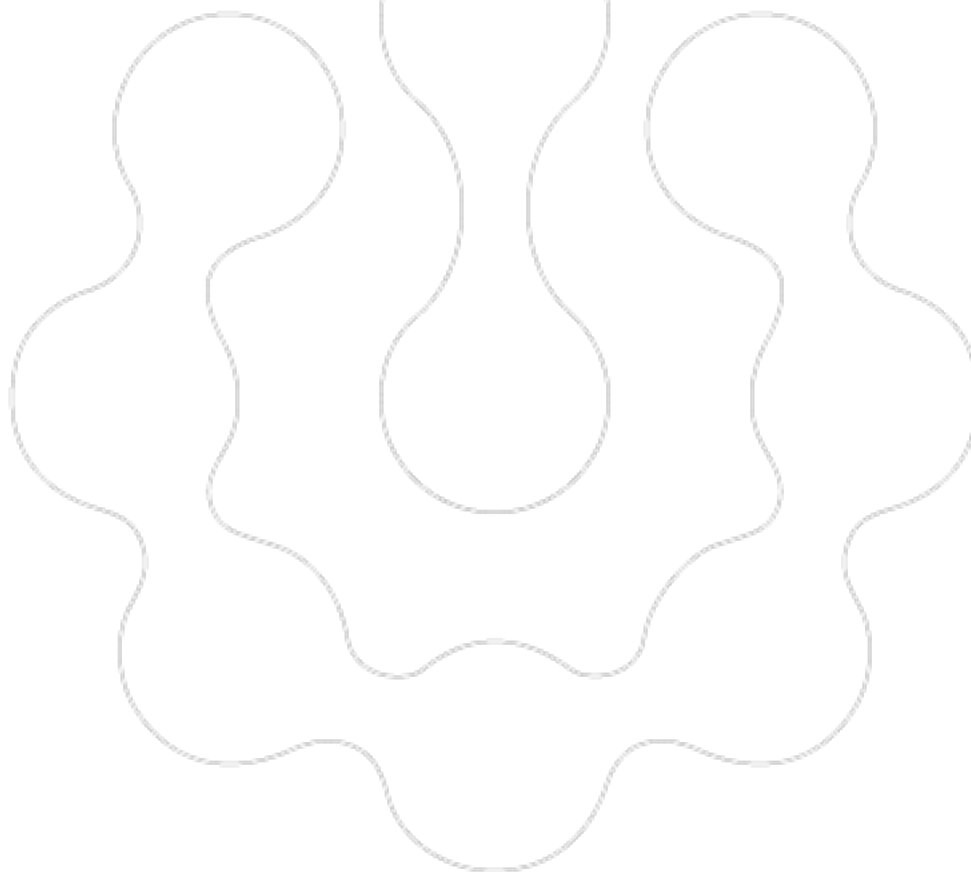
34030 0001	<b>3403 L260</b>	2	166	25.390	153		60	A++	HIE400 (HS-VG) / HIT400	8,9
34030 0002	<b>3403 L380</b>	2	256	37.140	145		50	A++	HME700 / HPI400	8,9
34030 0200	<b>3403 L260 DIMD</b>	2	166	25.390	153	•	60	A++	HIE400 (HS-VG) / HIT400	8,9
34030 0201	<b>3403 L380 DIMD</b>	2	256	37.140	145	•	50	A++	HME700 / HPI400	9,7

### ... with optics wide- (B) or narrow-wide beam (TB)

34030 0003	<b>3403 L260B</b>	2	166	25.790	155		60	A++	HIE400 (HS-VG) / HIT400	8,9
34030 0004	<b>3403 L260TB</b>	2	166	25.790	155		60	A++	HIE400 (HS-VG) / HIT400	8,9
34030 0005	<b>3403 L380B</b>	2	256	37.720	147		50	A++	HME700 / HPI400	8,9
34030 0006	<b>3403 L380TB</b>	2	256	37.720	147		50	A++	HME700 / HPI400	8,9
34030 0202	<b>3403 L260B DIMD</b>	2	166	25.790	155	•	60	A++	HIE400 (HS-VG) / HIT400	8,9
34030 0203	<b>3403 L260TB DIMD</b>	2	166	25.790	155	•	60	A++	HIE400 (HS-VG) / HIT400	8,9
34030 0204	<b>3403 L380B DIMD</b>	2	256	37.720	147	•	50	A++	HME700 / HPI400	9,7
34030 0205	<b>3403 L380TB DIMD</b>	2	256	37.720	147	•	50	A++	HME700 / HPI400	9,7

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)



## Accessories / Spare Parts

Type	Article no.	
34011 9001	<b>3401/010</b>	spare safety glass, for BR 3401/3402... (4 glasses per fitting necessary)
34011 9004	<b>3401/012 B</b>	spare cover PC, wide beam for BR 3401/3402... B 3 (4 glasses per fitting necessary)
34011 9005	<b>3401/012 TB</b>	spare cover PC, narrow-wide beam for BR 3401/3402... TB (4 glasses per fitting necessary)
34011 9002	<b>3401/010 IFS</b>	PC cover, for BR 3401/3402... IFS (4 glasses per fitting necessary)

NEW

# TRIANO XL MID LED High Bay Series 3405...



## Application:

Indoor areas with high mounting heights or with a requirement for high illumination levels. E.g. shipyards, hangars, machine-, maintenance- and assembly shops, cool storage facilities, walkways in rack areas, hardware stores, high-bay warehouses etc..

## Design:

**LED-housing:** Robust four-part extruded aluminium housing with cooling fins,

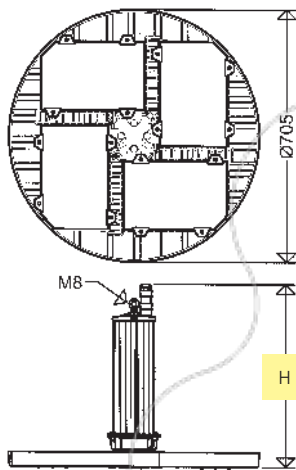
LED-modules and flat safety glasses (IK 09)  
All case parts powder coated in DB702N (mica-iron)

**Light distribution:** With optics wide (B), narrow-wide (TB) or narrow beam (T).

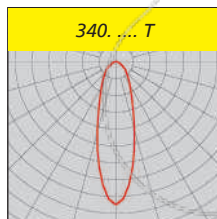
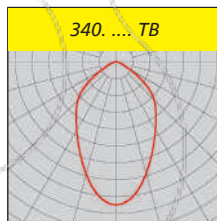
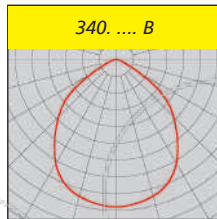
**Connection:** Preinstalled 3-pole plug-type connector. Plug mounted to the housing.

Socket included

**Mounting:** 1-point suspension, eyelet included.



Baureihe	H [mm]
Series	510
3405 L630.. DIMD	590



## Technical Data:

**LED module:** Complying Zhaga, 4,000K, CRI > 80, lifetime L70 > 100,000h at max. ambient temperature (see notes).

**ECG:** 220-240V, 50-60Hz, overvoltage protection 4kV, excess temperature protection, overload and short circuit protection.

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

**Dimm-interface:** For dim light operation (DIMD versions).

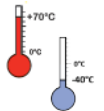
**Ambient temperature:** -20°C up to +50°C / +60°C (see article tables).

## Options:

- 5,700K (light colour 757), e.g. in combination with LED high bay light fittings TRIANO G2
- extremely narrow beam optic (TX) e.g. for aisles in high-bay warehouses
- light output reduction (LR) per 230V control line
- uniform luminous flux option (CL) to keep the light output on same level for the whole life cycle
- dimmable version „Corridor Mode“

## (DIMC)

- PC cover for applications in food industry areas (IFS Food)
- V-sign for locations with increased fire risk (D)
- silicone free
- for high ambient temperatures up to +70°C
- for low ambient temperatures down to -40°C



## SCHUCH Quality - your advantage:

- efficient 1 : 1 - substitute for conventional high bay floodlights with 1 x HME 1000W or 2 x HIT 400W
- fast and easy mounting and commissioning due to 1-point suspension and plug-in connection (Plug & Play)
- optimized thermal management due to segmentation of the LED modules and direct mounting to the housing, intelligently arranged cooling system, huge heat sink, excellent heat dissipation,
- high expectancy of life > 100.000 hours
- colour reproduction CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.

## Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Quantity of ECG	Power consumption [W] *	Luminous flux [lm] *	Light output [lm/W]	Tmax [°C]	Wide beam	Narrow-wide beam	Narrow beam	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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### 3405...



34050 0050	<b>3405 L340B</b>	3	200	32.320	162	+60	•			A++	HIT 400	19,8
34050 0051	<b>3405 L470B</b>	3	285	44.960	158	+60	•			A++	HME 700 / HIT 400	19,8
34050 0052	<b>3405 L630B</b>	3	405	60.860	150	+50	•			A++	HME 1000 / 2 x HIT 400	19,8
34050 0056	<b>3405 L340TB</b>	3	200	32.510	163	+60	•			A++	HIT 400	19,8
34050 0057	<b>3405 L470TB</b>	3	285	45.210	159	+60	•			A++	HME 700 / HIT 400	19,8
34050 0058	<b>3405 L630TB</b>	3	405	61.210	151	+50	•			A++	HME 1000 / 2 x HIT 400	19,8
34050 0053	<b>3405 L340T</b>	3	200	31.170	156	+60		•		A++	HIT 400	19,8
34050 0054	<b>3405 L470T</b>	3	285	43.350	152	+60		•		A++	HME 700 / HIT 400	19,8
34050 0055	<b>3405 L630T</b>	3	405	58.680	145	+50		•		A++	HME 1000 / 2 x HIT 400	19,8

### 3405... DIMD



dimmmable, DALI-interface

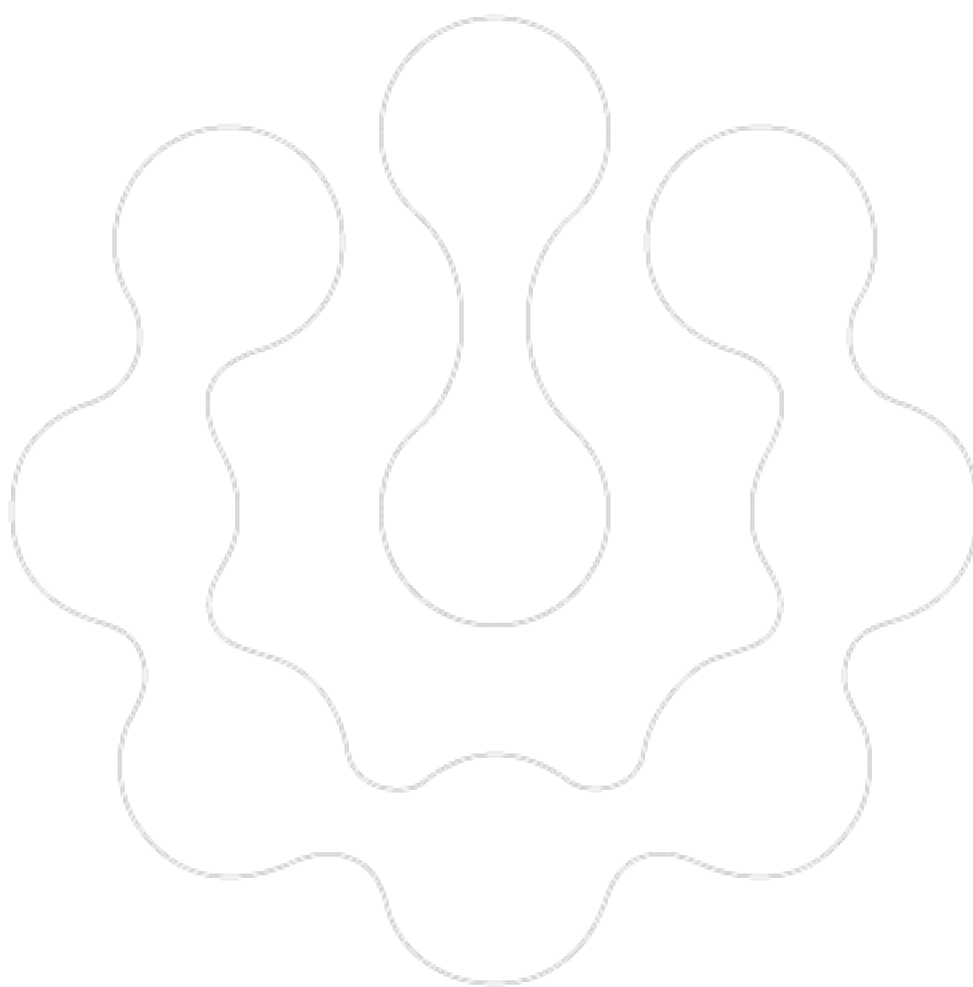
34050 0200	<b>3405 L340B DIMD</b>	3	200	32.320	162	+60	•		•	A++	HIT 400	20,4
34050 0201	<b>3405 L470B DIMD</b>	3	285	44.960	158	+60	•		•	A++	HME 700 / HIT 400	20,4
34050 0202	<b>3405 L630B DIMD</b>	3	405	60.860	150	+50	•		•	A++	HME 1000 / 2 x HIT 400	20,4
34050 0206	<b>3405 L340TB DIMD</b>	3	200	32.510	163	+60	•		•	A++	HIT 400	20,4
34050 0207	<b>3405 L470TB DIMD</b>	3	285	45.210	159	+60	•		•	A++	HME 700 / HIT 400	20,4
34050 0208	<b>3405 L630TB DIMD</b>	3	405	61.210	151	+50	•		•	A++	HME 1000 / 2 x HIT 400	20,4
34050 0203	<b>3405 L340T DIMD</b>	3	200	31.170	156	+60		•	•	A++	HIT 400	20,4
34050 0204	<b>3405 L470T DIMD</b>	3	285	43.350	152	+60		•	•	A++	HME 700 / HIT 400	20,4
34050 0205	<b>3405 L630T DIMD</b>	3	405	58.680	145	+50		•	•	A++	HME 1000 / 2 x HIT 400	20,4

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)

## Accessories / Spare Parts

Type	Article no.	
34011 9011	<b>3405/010</b>	spare safety glass, for BR 3405... (4 glasses per fitting necessary)





# Outdoor Light Fittings

## LED technology expands the scope

A good outdoor light fitting shall meet various requirements. It shall provide visibility conditions according to the standards, be photometrically optimized, be easy to install and maintain, and have a long service life.

With its design, a light fitting shall harmonically fit in the environment or set deliberately individual accents.

Economic efficiency and environmental compatibility have achieved new heights due to LED technology. In this regard, modern LED light fittings set completely new standards.

### FROM OUTDOOR LIGHT FITTINGS WITH INCANDESCENT LAMPS TO OUTDOOR LED LIGHT FITTINGS

Since the first outdoor light fitting was produced in 1906, this area of production has become an integral part of the SCHUCH manufacturing program.

With its 100-year experience, today SCHUCH offers a wide range of technical and decorative LED light fittings which provide cost-effective lighting for streets, roads and squares, in compliance to the standards.

#### 1906

Production of first street light fittings for incandescent lamps

#### 1949

Street light fittings for high pressure mercury lamps were included in the manufacturing program.

#### 1957

Production of the first street light fitting with a housing made of fiberglass-reinforced polyester using own "PREPEG".

#### 1985

Production start of legendary street light fittings Series 43 and 44.



### LED TECHNOLOGY

#### 2009

First LED street light fittings were manufactured at the plant in Worms.

#### 2011

Production of first street light fittings (Series 47) specially designed for LEDs.

#### 2012-14

The Company's LED product range extended tremendously by manufacturing suspended LED light fittings, LED floodlights and LED plane surface floodlights.

#### 2015

Decorative outdoor light fittings series 544 have been added, SCHUCH has a complete range of technical outdoor LED light fittings.

#### 2016

Launch of Light-Management-System „LIMAS“. A unique remote control system for energy-saving and on-demand control of public and industrial street lighting.

#### 2017

Introduction of the decorative LED-Street-Light-Fittings KONIC, CUPINA and PLANEO

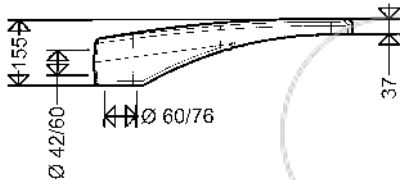
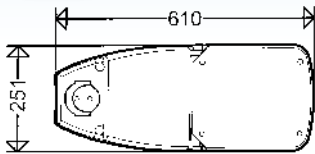
#### 2018

FILOS Vario – introduction of the first LED outdoor light fitting with adjustable luminous flux.

Product	Series	Page
<b>Technical outdoor light fittings</b>		
Series 48...	48...	86
Series 47...	47...	89
• for pedestrian crossings or for object protection	... FUE	92
FILOS Vario with adjustable luminous flux	42...	93
Series 46/46AL...	46/46AL...	95
Series 43 C...	43 C...	97
<b>Rope supported</b>		
Series 59...	59...	99
Series 49...	49...	101
<b>Polyester Outdoor Light Fitting</b>		
Series 287...	287...	103
<b>Decorative outdoor light fittings</b>		
<b>Pole-Top light fittings</b>		
KONIC	544...	104
CUPINA	556...C	107
PLANEO	557... C	109
Series 541... C OR	541... C OR	111
Series 543... C	543... C	113
Series 553... C	553... C	115
<b>Pendant Luminaires</b>		
Series 564/565...	564/565...	117
<b>Plane Surface Floodlights</b>		
Series 48A...	48A...	119
Series 47A...	47A...	121
Series 7700... A	7700... A	123
Series 7800... A	7800... A	125
Series 7571/7572/7573... A	7571/2/3... A	127
<b>Floodlights</b>		
Series 7700...	7700...	129
Series 7800...	7800...	131
Series 7900...	7900...	133
<b>Pole arm carriers</b>		
		134
<b>Pole-top brackets</b>		
		135
<b>LIMAS</b>		
intelligent light control		136



## LED Outdoor Light Fitting with Multi-Purpose Mounting System Series 48...



Outstanding mounting advantage



### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

### Application:

Residential streets, by-roads, traffic-calmed zones, parks, walkways and bicycle lanes, pedestrian zones, car parks, gateways

### Design:

**Housing:** Die-cast aluminium, 2-parts, charcoal coloured metallic matt powder coated (almost DB 702). **Upper section** with LED-Module, optic, glass cover and ECG, hinged and detachable. **Lower section** with pole mounting system, adjustment of inclination, cable retainer, cable entry with pressure compensation system.

**Glass cover:** Flat safety glass, Impact

resistance IK08.

**Light distribution:** Asymmetric or asymmetric extremely wide beam (ABX).

**Connection:** With isolating plug connection.

**Pole mounting device:** Die-cast aluminium, universal system for post top mounting Ø 60/76mm and side entry mounting Ø 42/60mm x 100mm.

**Inclination:** Post top mounting 0°, 5° and 10° (standard: 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

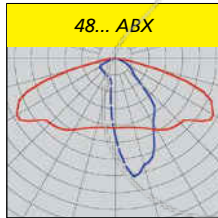
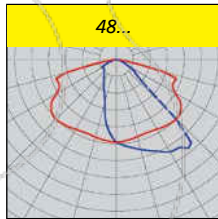
### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer.

Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)



### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- protection class I
- optic for M-classes (AB3)
- low glare optic (ABL)
- seawater resistant version

- for connection to group or central battery systems (ZB)
- Light Management System (LIMAS)
- screening device to the house side
- special painting in RAL colours

### Schuch Quality – your advantage:

#### high quality, reliable at long time application

- high system life time due to use of high-quality ECGs and LED modules
- ECG with surge voltage resistance, reliable due to overload, short-circuit and over temperature protection
- optimized thermal management due to direct adaption of the LED modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- long-lasting, corrosion resistant die-cast aluminium housing with plain surface
- integrated pressure compensation system for defined „Breathing“ of the fitting

#### easy to install, to maintain and to retrofit

- removable upper part of the housing allows a comfortable, time- and cost-saving mounting in 2 steps:  
**1st step:** Mount bottom part on the pole and connect the mains  
**2nd step:** Hinge upper part, connect isolating plug and shut the housing. **READY**
- tiltable universal pole mounting system for post top and side entry mounting, no tools required
- adjustable inclination of the light fitting, no tools required
- removable upper part of the housing allows a comfortable maintenance, no painful overhead working. ECG can be replaced on-site
- upgrades or converts in regards to technical development by easy change of the upper-part of the housing. After the change of the LED modules the upper part of the housing can be used again.

#### uncompromisingly energy efficient and eco-friendly

- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
- eco-friendly, no light emission into the upper half-space. **Dark-Sky requirements are fulfilled**
- future proof by using standardized LED-modules (Zhaga)

Article no.	Type	Power consumption Wj* (CL: start of operating life)	Power consumption Wj* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Constant luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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## 48...



### asymmetrical wide beam

\*\*\*  
Replaces HME 80W  
Replaces HME 125W / HIE 70W

48001 0030	48 0801	11		1.250	114			A++	7,5
48001 0045	48 0802	14		1.700	121			A++	7,5
48001 0046	48 0803	20		2.240	112			A++	7,5
48001 0005	48 1601	19		2.410	127			A++	7,6
48001 0006	48 1602	26		3.280	126			A++	7,6
48001 0007	48 1603	36		4.310	120			A++	7,6
48001 0047	48 2401	28		3.670	131			A++	7,6
48001 0048	48 2402	39		4.990	128			A++	7,6
48001 0049	48 2403	54		6.500	120			A++	7,6
48001 0015	48 3201	36		4.690	130			A++	7,7
48001 0016	48 3202	50		6.390	128			A++	7,7
48001 0017	48 3203	70		8.310	119			A++	7,7
48001 0056	48 0802 CL	11	14	1.360	124	•		A++	7,5
48001 0057	48 0803 CL	16	20	1.790	112	•		A++	7,5
48001 0105	48 1601 CL	15	19	1.930	129	•		A++	7,6
48001 0106	48 1602 CL	21	26	2.620	125	•		A++	7,6
48001 0107	48 1603 CL	29	36	3.450	119	•		A++	7,6
48001 0058	48 2401 CL	22	28	2.930	133	•		A++	7,6
48001 0059	48 2402 CL	31	39	3.990	129	•		A++	7,6
48001 0060	48 2403 CL	43	54	5.200	121	•		A++	7,6
48001 0115	48 3201 CL	29	36	3.750	129	•		A++	7,7
48001 0116	48 3202 CL	40	50	5.110	128	•		A++	7,7
48001 0117	48 3203 CL	56	70	6.650	119	•		A++	7,7
48001 0061	48 0802 LR	14		1.700	121		•	A++	7,5
48001 0092	48 0803 LR	20		2.240	112		•	A++	7,5
48001 0025	48 1601 LR	19		2.410	127		•	A++	7,6
48001 0026	48 1602 LR	26		3.280	126		•	A++	7,6
48001 0027	48 1603 LR	36		4.310	120		•	A++	7,6
48001 0068	48 2401 LR	28		3.670	131		•	A++	7,6
48001 0070	48 2402 LR	39		4.990	128		•	A++	7,6
48001 0078	48 2403 LR	54		6.500	120		•	A++	7,6
48001 0035	48 3201 LR	36		4.690	130		•	A++	7,7
48001 0036	48 3202 LR	50		6.390	128		•	A++	7,7
48001 0037	48 3203 LR	70		8.310	119		•	A++	7,7

\* see notes \*\* 45% Rated input power with 50% luminous flux

\*\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



Article no.	Type	Power consumption Wj* (CL: start of operating life)	Power consumption Wj* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Constant luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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## 48... ABX



### asymmetrical extremely wide beam

48001 0001	48 0801ABX	11		1.260	115			A++	7,5
48001 0011	48 0802ABX	14		1.710	122			A++	7,5
48001 0013	48 0803ABX	20		2.260	113			A++	7,5
48001 0002	48 1601ABX	19		2.400	126			A++	7,6
48001 0012	48 1602ABX	26		3.270	126			A++	7,6
48001 0014	48 1603ABX	36		4.290	119			A++	7,6
48001 0003	48 2401ABX	28		3.670	131			A++	7,6
48001 0004	48 2402ABX	39		4.990	128			A++	7,6
48001 0009	48 2403ABX	54		6.500	120			A++	7,6
48001 0079	48 3201ABX	36		4.680	130			A++	7,7
48001 0080	48 3202ABX	50		6.370	127			A++	7,7
48001 0081	48 3203ABX	70		8.290	118			A++	7,7
48001 0111	48 0802ABX CL	11	14	1.370	125	•		A++	7,5
48001 0113	48 0803ABX CL	16	20	1.810	113	•		A++	7,5
48001 0102	48 1601ABX CL	15	19	1.920	128	•		A++	7,6
48001 0112	48 1602ABX CL	21	26	2.610	124	•		A++	7,6
48001 0114	48 1603ABX CL	29	36	3.440	119	•		A++	7,6
48001 0103	48 2401ABX CL	22	28	2.930	133	•		A++	7,6
48001 0166	48 2402ABX CL	31	39	3.990	129	•		A++	7,6
48001 0109	48 2403ABX CL	43	54	5.200	121	•		A++	7,6
48001 0082	48 3201ABX CL	29	36	3.740	129	•		A++	7,7
48001 0083	48 3202ABX CL	40	50	5.100	128	•		A++	7,7
48001 0084	48 3203ABX CL	56	70	6.630	118	•		A++	7,7
48001 0031	48 0802ABX LR	14		1.710	122		•	A++	7,5
48001 0033	48 0803ABX LR	20		2.260	113		•	A++	7,5
48001 0022	48 1601ABX LR	19		2.400	126		•	A++	7,6
48001 0032	48 1602ABX LR	26		3.270	126		•	A++	7,6
48001 0034	48 1603ABX LR	36		4.290	119		•	A++	7,6
48001 0023	48 2401ABX LR	28		3.670	131		•	A++	7,6
48001 0024	48 2402ABX LR	39		4.990	128		•	A++	7,6
48001 0029	48 2403ABX LR	54		6.500	120		•	A++	7,6
48001 0086	48 3201ABX LR	36		4.680	130		•	A++	7,7
48001 0087	48 3202ABX LR	50		6.370	127		•	A++	7,7
48001 0091	48 3203ABX LR	70		8.290	118		•	A++	7,7

\* see notes \*\* 45% Rated input power with 50% luminous flux



### Accessories / Spare Parts

Article No.	Type	
48002 9000	48/010	flat safety glass cover

## LED Outdoor Light Fitting with Multi-Purpose Mounting System Series 47...



**DB** standardized by Deutsche Bahn AG

### Application:

By-roads and main, roundabouts, traffic-calmed zones, factory streets and tracks in industrial plants, car parks, gateways etc.

### Design:

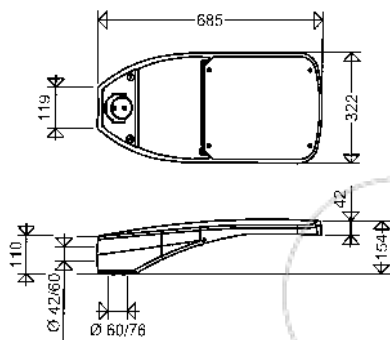
**Housing:** Die-cast aluminium, 2-parts, charcoal coloured metallic matt powder coated DB 702N (mica-iron paint). Upper section with LED-Module, optic, glass cover and electro kit, hinged and detachable. Lower section with pole mounting system, adjustment of inclination, cable retainer, cable entry with pressure compensation system. **Glass cover:** Flat safety glass, impact resistance IK09.

**Light distribution:** Asymmetric wide or asymmetric extremely wide (ABX) beam.

**Electro kit:** Carrying all electrical components, mains connection terminal as isolating plug connection completely removable.

**Pole mounting device:** Die-cast aluminium, universal system for post top mounting Ø 60/76mm and side entry mounting Ø 42/60mm x 100mm.

**Inclination:** Post top mounting 0°, 5° and 10° (standard: 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.



Outstanding mounting advantage



### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

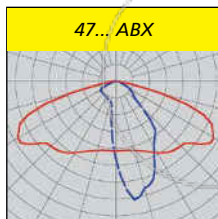
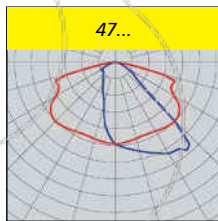
**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)



### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- protection class I
- optic for M-classes (AB3)
- low glare optic (ABL)
- for connection to group or central
- battery systems (ZB)
- for illumination of sluices
- seawater resistant version
- Light Management System (LIMAS)
- screening device to the house side
- special painting in all RAL colours

### Schuch Quality – your advantage:

#### high quality, reliable at long time application

- high system life time due to use of high-quality ECGs and LED modules
- ECG with surge voltage resistance, reliable due to overload, short-circuit and over temperature protection
- optimized thermal management due to direct adaption of the LED modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- long-lasting, corrosion resistant die-cast aluminium housing with plain surface
- integrated pressure compensation system for defined „Breathing“ of the fitting

#### easy to install, to maintain and to retrofit

- removable upper part of the housing allows a comfortable, time- and cost-saving mounting in 2 steps:
  - 1st step:** Mount bottom part on the pole and connect the mains
  - 2nd step:** Hinge upper part, connect isolating plug and shut the housing. **READY**
- tiltable pole mounting system for post top and side entry mounting, no tools required
- adjustable inclination of the light fitting, no tools required
- removable upper part of the housing allows a comfortable maintenance, no painful overhead working. ECG can be replaced on-site
- upgrades or converts in regards to technical development by easy change of the upper-part of the housing. After the change of the LED modules the upper part of the housing can be used again.

#### uncompromisingly energy efficient and eco-friendly

- optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
- eco-friendly, no light emission into the upper half-space. Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Uniform luminous flux function (CL)	Output reduction (Lr)	Energy efficiency class	Weight [kg] (without packing material)
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47...



#### asymmetrical wide beam

47000 0003	47 3201	36		4.880	136			A++	10,2
47000 0009	47 3202	50		6.630	133			A++	10,2
47000 0004	47 3203	70		8.640	123			A++	10,2
47000 0005	47 4801	52		7.270	140			A++	10,2
47000 0010	47 4802	74		9.890	134			A++	10,2
47000 0047	47 4803	104		12.790	123			A++	10,2
47000 0007	47 6401	69		9.510	138			A++	10,3
47000 0011	47 6402	97		12.920	133			A++	10,3
47000 0048	47 6403	137		16.660	122			A++	10,3
47000 0063	47 3201 CL	29	36	3.900	134	•		A++	10,2
47000 0070	47 3202 CL	40	50	5.310	133	•		A++	10,2
47000 0064	47 3203 CL	56	70	6.920	124	•		A++	10,2
47000 0065	47 4801 CL	42	52	5.820	139	•		A++	10,2
47000 0071	47 4802 CL	59	74	7.910	134	•		A++	10,2
47000 0066	47 4803 CL	83	104	10.230	123	•		A++	10,2
47000 0067	47 6401 CL	55	69	7.610	138	•		A++	10,3
47000 0072	47 6402 CL	78	97	10.330	132	•		A++	10,3
47000 0068	47 6403 CL	110	137	13.330	121	•		A++	10,3
47000 0013	47 3201 LR	36		4.880	136		•	A++	10,2
47000 0019	47 3202 LR	50		6.630	133		•	A++	10,2
47000 0014	47 3203 LR	70		8.640	123		•	A++	10,2
47000 0015	47 4801 LR	52		7.270	140		•	A++	10,2
47000 0020	47 4802 LR	74		9.890	134		•	A++	10,2
47000 0049	47 4803 LR	104		12.790	123		•	A++	10,2
47000 0017	47 6401 LR	69		9.510	138		•	A++	10,3
47000 0021	47 6402 LR	97		12.920	133		•	A++	10,3
47000 0050	47 6403 LR	137		16.660	122		•	A++	10,3

\* see notes



Endurance tests in Dubai confirm excellent thermal management of Series 47 ..

#### Test conditions:

- housing painted white
- LED-fitting with maximum power consumption
- Maximum current supply
- Operation during daytime and at direct sunlight

#### Result:

The 47er performed at any time correctly and reliably.

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Uniform luminous flux function (CL)	Output reduction (LR)	Energy efficiency class	Weight [kg] (without packing material)
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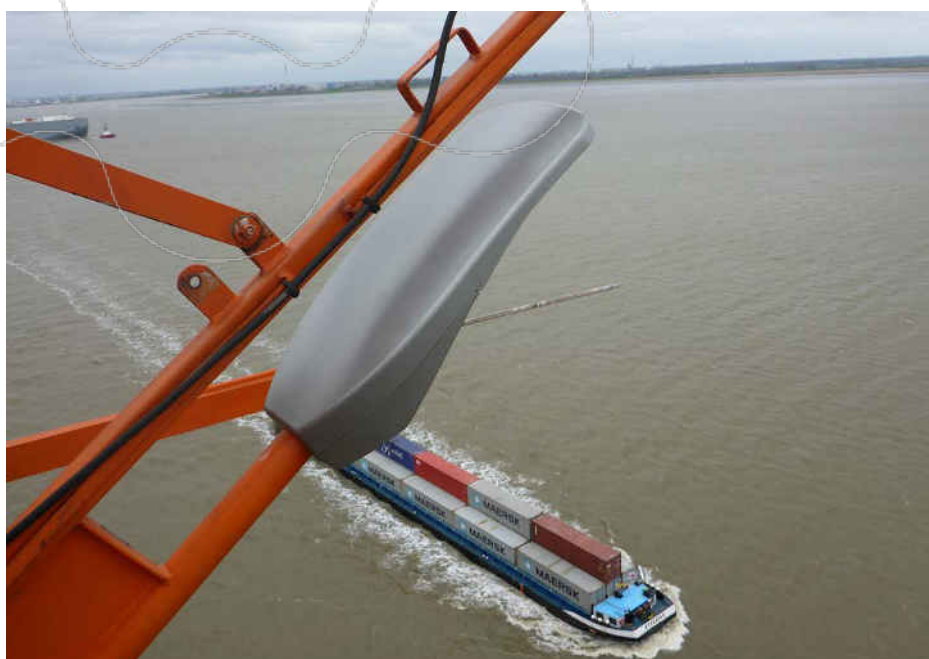
## 47... ABX



### asymmetrical extremely wide beam

47000 0155	47 3201ABX	36		4.860	135			A++	10,2
47000 0156	47 3202ABX	50		6.610	132			A++	10,2
47000 0408	47 3203ABX	70		8.610	123			A++	10,2
47000 0157	47 4801ABX	52		7.270	140			A++	10,2
47000 0158	47 4802ABX	74		9.890	134			A++	10,2
47000 0159	47 4803ABX	104		12.800	123			A++	10,2
47000 0160	47 6401ABX	69		9.580	139			A++	10,3
47000 0161	47 6402ABX	97		13.020	134			A++	10,3
47000 0166	47 6403ABX	137		16.790	123			A++	10,3
47000 0167	47 3201ABX CL	29	36	3.890	134	•		A++	10,2
47000 0428	47 3202ABX CL	40	50	5.290	132	•		A++	10,2
47000 0427	47 3203ABX CL	56	70	6.890	123	•		A++	10,2
47000 0175	47 4801ABX CL	42	52	5.820	139	•		A++	10,2
47000 0176	47 4802ABX CL	59	74	7.910	134	•		A++	10,2
47000 0177	47 4803ABX CL	83	104	10.240	123	•		A++	10,2
47000 0178	47 6401ABX CL	55	69	7.660	139	•		A++	10,3
47000 0179	47 6402ABX CL	78	97	10.410	133	•		A++	10,3
47000 0180	47 6403ABX CL	110	137	13.430	122	•		A++	10,3
47000 0184	47 3201ABX LR	36		4.860	135		•	A++	10,2
47000 0185	47 3202ABX LR	50		6.610	132		•	A++	10,2
47000 0186	47 3203ABX LR	70		8.610	123		•	A++	10,2
47000 0187	47 4801ABX LR	52		7.270	140		•	A++	10,2
47000 0188	47 4802ABX LR	74		9.890	134		•	A++	10,2
47000 0189	47 4803ABX LR	104		12.800	123		•	A++	10,2
47000 0190	47 6401ABX LR	69		9.580	139		•	A++	10,3
47000 0191	47 6402ABX LR	97		13.020	134		•	A++	10,3
47000 0192	47 6403ABX LR	137		16.790	123		•	A++	10,3

\* see notes



Series 47...  
seawaterresistant version

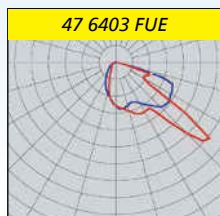
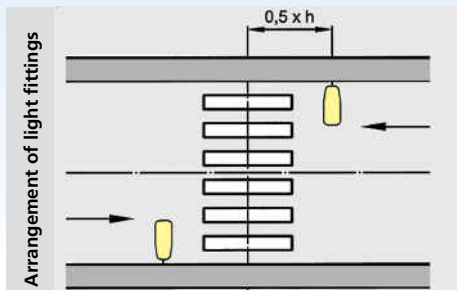
Outdoor  
Light Fittings

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Uniform luminous flux function (CL)	Output reduction (LR)	Energy efficiency class	Weight [kg] (without packing material)
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## 47... FUE

### For pedestrian crossing or for object protection



#### Application:

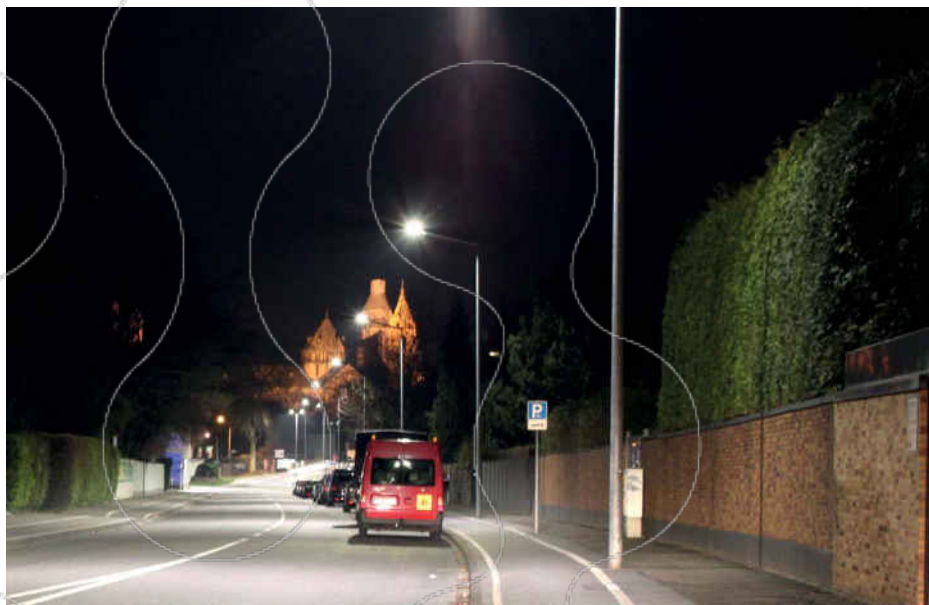
Pedestrian crossings, object protection, fence, apron, area illumination ...

#### Design:

Asymmetrical light distribution. Major light beam crosswise to longitudinal axis of the luminaire with limited backward light beam.

47000 0448	47 6403 FUE	137	16.920	124			A++	10,3
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\* see notes



## Accessories / Spare Parts

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Article no.	Type	
470019002	47/010	flat safety glass

NEW

## FILOS

### LED-Outdoor Light Fitting

with variable setting of the luminous flux

### Series 42... VARIO

#### Application:

Residential-, side roads und through traffic streets, footpaths and cycle tracks, traffic-calmed areas, factory streets in industrial plants, car parks, gateways etc..

#### Design :

**Housing:** Glass fibre reinforced polyester resin.

**Diffuser:** PMMA clear, hingeable and detachable.

**Gear tray:** Aluminium, with LED modul, optics and all electrical components in compact unit protected against accidental contact, isolating plug connection and

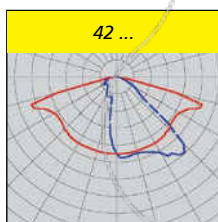
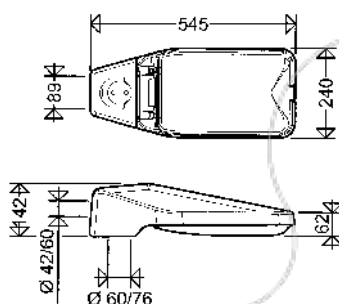
cable retainer.

**Switch** for setting the luminous flux of the luminaire.

**Central closing:** Stainless steel.

**Light distribution:** Asymmetric wide beam.

**Mounting system:** Die-cast aluminium, universal on pole end Ø of 60/76mm or for pole outreaches Ø of 42/60 x 100mm. Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.



#### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

#### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

#### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- protection class II
- UV-protected painted housing
- asymmetric beam (A)
- asymmetric extremely wide beam (ABX)

#### SCHUCH Quality – your advantage:

- a single luminaire replaces conventional luminaires from 80/125W HME to 50/70W HST or HME 2 x 80W
- variably adjustable luminous flux as required, from 2,500 to 5,000lm
- simple, fast, tool-free setting on site, by means of integrated switches, can be changed at any time
- high system life time (100,000h) due to use of high-quality components
- ECG with high over-voltage protection (10kV) reliable due to overload, short circuit and over temperature protection
- protection of the LEDs against mechanical and electrostatic discharge due to sandwich-design of gear tray and cover
- Quick an easy mounting due to
  - tool-free opening of the luminaire by means of a central toggle clamp made of stainless steel
  - gear tray hingeable and detachable.
  - integrated universal pole mounting system (side entry mounting Ø 42/60mm with inclination adjustment up to -15° post top mounting Ø 60/76mm), no additional flanges or adapter pieces required.
  - more than 50% weight reduction compared to luminaires with die-cast aluminium housing
- quick changeover due to easily replaceable gear-tray with disconnecter
- future proof by using standardized LED-modules (Zhaga)
- highly economical storage due to standardisation

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article No.	Type	Power consumption [W]*	Luminous flux [lm] <sup>1)</sup> *	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. **	Weight [kg] (without packing material)
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## 42... VARIO



The luminous flux is variably adjustable to values between 2,500lm and 5,000lm.

Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.

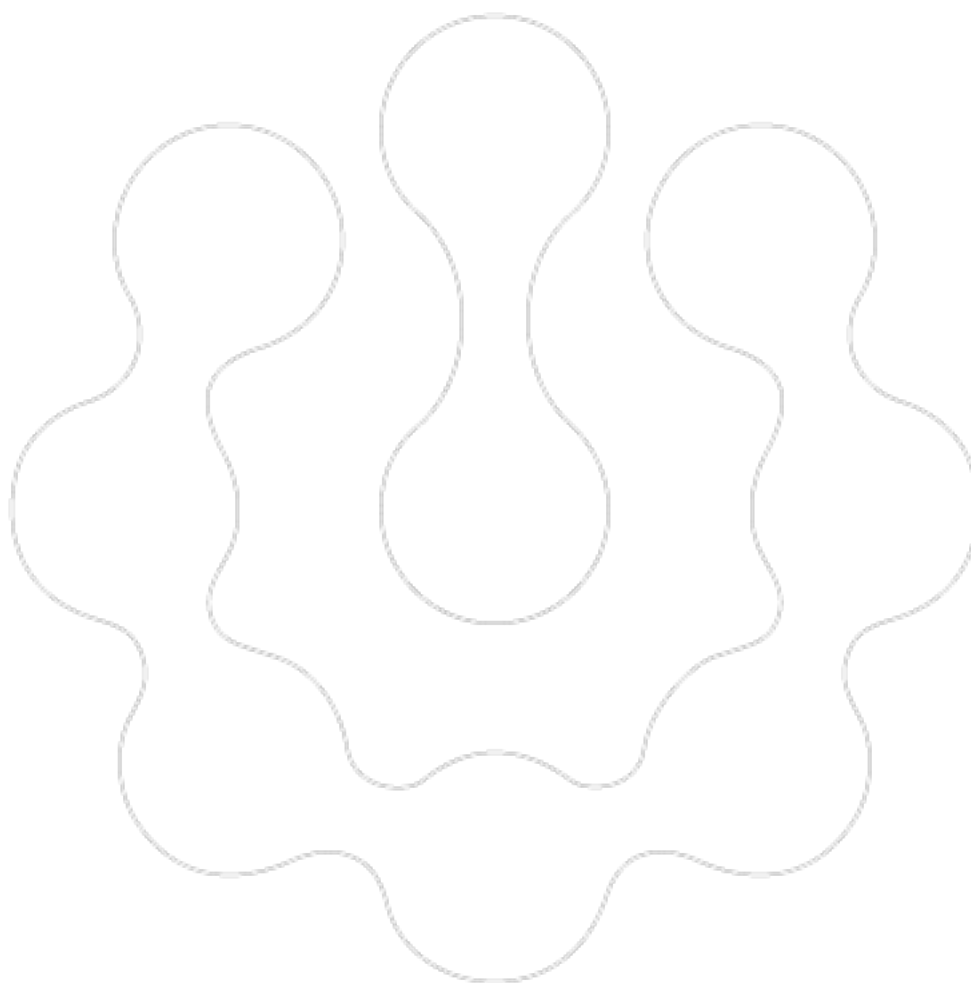
42000 0001	<b>42 L50 VARIO</b>	19	2.500	132	A++	HME 80W / HST 50W	3,6
		22	2.900 <sup>2)</sup>	132	A++	HME 125W	
		32	4.100	128	A++	HST 70W	
		41	5.000	122	A++	2 x HME 80W	

1) Examples of possible settings

2) Factory setting

\* see notes

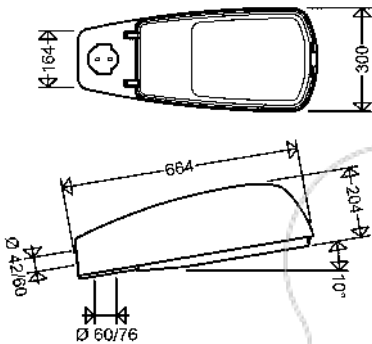
\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



## Accessories / Spare Parts

Article no.	Type	
42001 9002	<b>42000</b>	spare glass PMMA, clear

## Modern LED-Outdoor Light Fitting with Multi-Purpose Mounting System Series 46...



Compact unit with all electrical components,  
detachable without tools.

### Application:

Residential streets, by-roads and thoroughfares, walkways and bicycle lanes, traffic-calmed zones, factory streets in industrial plants etc.

### Design:

**Housing:** Glass fibre reinforced polyester resin with UV resistant coating, integrated pressure compensation system.

**Diffuser:** Flat safety glass, hinged and detachable. Profile gasket, UV stabilized, hinged and detachable.

**Fasteners:** Stainless steel.

**Gear tray:** Aluminium, with LED module, optical and all electrical components, in compact unit connected with aluminium frame and glass pane, hinged and detachable, isolating plug connection and cable retainer.

**Light distribution:** Asymmetric wide or asymmetrical extremely wide beam (ABX).

**Mounting system:** Universal pole mounting system made from die-cast aluminium for pole top and side entry mounting. Pole end Ø of 60mm and 76mm (inclination: 10°).

**Supporting section:** 42Ø x 100mm or 60 x 100mm.

### Electrical design:

LED module: Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

ECG: 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

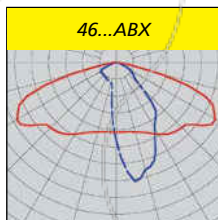
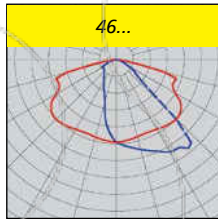
**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)



### Options:

- 3000 K (light-colour 730)
- 1,800K (light colour „Amber“)
- protection class I
- asymmetrical beam (A) plane surface floodlight optic
- special painting in all RAL colours

### SCHUCH Quality – your advantage:

- product of excellent quality, well known on the market thanks to its reliable long-term application
  - high system life time due to use of high-quality ECGs and LED modules
  - ECG with surge voltage resistance, reliable due to overload, short-circuit and over temperature protection
  - high quality housing made glass fibre reinforced from polyester with weather-resistant coating
  - integrated pressure compensation system for well defined „breathing“, to avoid the formation of condensation water inside the light fitting
- easy to install, to maintain or to change components
  - **tool free** turnable pole mounting system for quick post top or side entry mounting
  - one hinged and detachable compact unit, consisting of glass, aluminum frame, gear tray and LED, to be opened **without tool**, thus allowing a comfortable maintenance and a quick change of components or upgrade in case of technical development of LED
- uncompromisingly energy efficient, economic and eco-friendly
  - high energy saving compared to existing installation with HPMV lamps
  - optimal light distribution due to highly efficient lens optics
  - homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
  - eco-friendly, no light emission into the upper half-space. Dark-Sky requirements are fulfilled
  - future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article No.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Constant luminous flux function (CL)	Output reduction (LR)	Energy efficiency class	Weight [kg] (without packing material)
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46...



#### asymmetrical extremely wide beam

46004 0001	46 1601	19		2.490	131			A++	6,8
46004 0004	46 1602	26		3.390	130			A++	6,8
46004 0002	46 1603	36		4.400	122			A++	6,8
46004 0005	46 3201	36		4.920	137			A++	6,9
46004 0003	46 3202	50		6.660	133			A++	6,9
46004 0031	46 1601 CL	15	19	1.990	133	•		A++	6,8
46004 0034	46 1602 CL	21	26	2.710	129	•		A++	6,8
46004 0032	46 1603 CL	29	36	3.520	121	•		A++	6,8
46004 0035	46 3201 CL	29	36	3.930	136	•		A++	6,9
46004 0033	46 3202 CL	40	50	5.330	133	•		A++	6,9
46004 0011	46 1601 LR	19		2.490	131		•	A++	6,8
46004 0014	46 1602 LR	26		3.390	130		•	A++	6,8
46004 0012	46 1603 LR	36		4.400	122		•	A++	6,8
46004 0015	46 3201 LR	36		4.920	137		•	A++	6,9
46004 0013	46 3202 LR	50		6.660	133		•	A++	6,9

\* see notes

46... ABX



#### asymmetrical extremely wide beam

46004 0056	46 1601ABX	19		2.500	132			A++	6,8
46004 0057	46 1602ABX	26		3.410	131			A++	6,8
46004 0052	46 1603ABX	36		4.430	123			A++	6,8
46004 0058	46 3201ABX	36		4.950	138			A++	6,9
46004 0059	46 3202ABX	50		6.700	134			A++	6,9
46004 0072	46 1601ABX CL	15	19	2.000	133	•		A++	6,8
46004 0073	46 1602ABX CL	21	26	2.720	130	•		A++	6,8
46004 0053	46 1603ABX CL	29	36	3.540	122	•		A++	6,8
46004 0074	46 3201ABX CL	29	36	3.960	137	•		A++	6,9
46004 0075	46 3202ABX CL	40	50	5.360	134	•		A++	6,9
46004 0082	46 1601ABX LR	19		2.500	132		•	A++	6,8
46004 0083	46 1602ABX LR	26		3.410	131		•	A++	6,8
46004 0084	46 1603ABX LR	36		4.430	123		•	A++	6,8
46004 0085	46 3201ABX LR	36		4.950	138		•	A++	6,9
46004 0086	46 3202ABX LR	50		6.700	134		•	A++	6,9

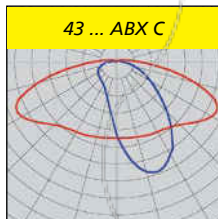
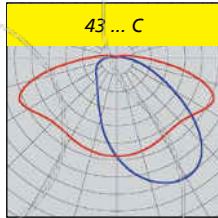
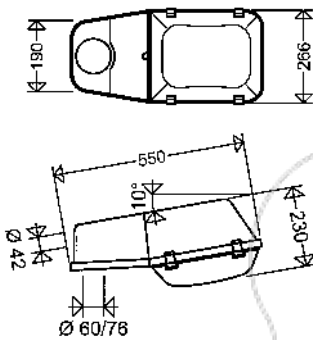
\* see notes



#### Accessories / Spare Parts

Article no.	Type	
46001 9002	46/010	flat glass pane with aluminium frame

## LED-Outdoor Light Fitting with Universal Mounting System Series 43... C



### Application:

Residential-, side roads und through traffic streets, footpaths and cycle tracks, traffic-calmed areas, factory streets in industrial plants, car parks, gateways etc..

### Design :

**Housing:** Glass fibre reinforced polyester resin.

**Diffuser:** PMMA frosted, hingeable and detachable.

**Closure:** Stainless steel latches.

**Gear tray/heat sink:** Aluminium, with LED modul, optic and all electrical

components in compact unit protected against accidental contact, isolating plug connection and cable retainer.

**Light distribution:** Asymmetric wide or asymmetric extremely wide (ABX) beam.

**Mounting system:** Universal mounting on pole end Ø of 60mm and 76mm (inclination of the luminaire: 10°) or for pole outreaches with supporting section of 42Ø x 100mm.

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_g > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- with flat diffuser
- protection class II
- pole outreaches Ø 60 x 100mm
- UV-protected painted housing
- asymmetrical beam (A)

### SCHUCH Quality – your advantage:

- high system life time due to use of high-quality components
- ECG with high over-voltage protection reliable due to overload, short circuit and over temperature protection
- fast to maintain or to change components
- high energy saving compared to existing installation with HPMV lamps
- further energy saving via the life of the LED by the Constant luminous flux function (CL). No luminous flux decrease due to the omission of the usual oversizing in new plannings.
- optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the Multi-Layer technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping. No dark zones in the road if any single LED would fail and the uniformity of the illumination is kept.
- frosted cover for glare limitation
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article No.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Constant luminous flux function	Light output reduction**	Energy efficiency class	Weight [kg] (without packing material)
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## 43 ... C



### asymmetrical wide beam

43002 0007	43 0801 C	11		1.330	121			A++	4,5
43002 0008	43 0802 C	14		1.810	129			A++	4,5
43002 0009	43 0803 C	20		2.380	119			A++	4,5
*** Replaces HME 50W	43002 0004	43 1601 C	19	2.520	133			A++	4,5
Replaces HME 80W / HST 50W	43002 0006	43 1602 C	26	3.430	132			A++	4,5
Replaces HME 125W	43002 0005	43 1603 C	36	4.460	124			A++	4,5
43002 0010	43 0802 C CL	11	14	1.450	132	•		A++	4,5
43002 0017	43 0803 C CL	16	20	1.900	119	•		A++	4,5
43002 0034	43 1601 C CL	15	19	2.020	135	•		A++	4,5
43002 0036	43 1602 C CL	21	26	2.740	130	•		A++	4,5
43002 0035	43 1603 C CL	29	36	3.570	123	•		A++	4,5
43002 0018	43 0802 C LR	14		1.810	129		•	A++	4,5
43002 0019	43 0803 C LR	20		2.380	119		•	A++	4,5
43002 0014	43 1601 C LR	19		2.520	133		•	A++	4,5
43002 0016	43 1602 C LR	26		3.430	132		•	A++	4,5
43002 0015	43 1603 C LR	36		4.460	124		•	A++	4,5

## 43 ... ABX C



### asymmetrical extremely wide beam

43002 0201	43 0801ABX C	11		1.340	122			A++	4,5
43002 0202	43 0802ABX C	14		1.820	130			A++	4,5
43002 0203	43 0803ABX C	20		2.390	120			A++	4,5
43002 0204	43 1601ABX C	19		2.530	133			A++	4,5
43002 0205	43 1602ABX C	26		3.440	132			A++	4,5
43002 0206	43 1603ABX C	36		4.470	124			A++	4,5
43002 0212	43 0802ABX C CL	11	14	1.450	132	•		A++	4,5
43002 0213	43 0803ABX C CL	16	20	1.910	119	•		A++	4,5
43002 0214	43 1601ABX C CL	15	19	2.030	135	•		A++	4,5
43002 0215	43 1602ABX C CL	21	26	2.750	131	•		A++	4,5
43002 0216	43 1603ABX C CL	29	36	3.580	123	•		A++	4,5
43002 0222	43 0802ABX C LR	14		1.820	130		•	A++	4,5
43002 0223	43 0803ABX C LR	20		2.390	120		•	A++	4,5
43002 0224	43 1601ABX C LR	19		2.530	133		•	A++	4,5
43002 0225	43 1602ABX C LR	26		3.440	132		•	A++	4,5
43002 0226	43 1603ABX C LR	36		4.470	124		•	A++	4,5

\* see notes

\*\* 45% power consumption / 50% luminous flux

\*\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article No.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Light output reduction (LR)**	Previous lamps	Energy saving [%]
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## Retrofit Kits US43.../US43... C

### for energy efficient upgrading of conventional installations

43005 9634	US43 1601 C	19	2.520	133		HME 50W	76
43005 9635	US43 1602 C	26	3.430	132		HME 80W	71
43005 9636	US43 1603 C	36	4.460	124		HME 125W	74

Retrofit kits for high pressure lamps HI/HS on request.

\* see notes

\*\* 45% power consumption / 50% luminous flux

## Accessories / Spare Parts

Article no.	Type	
43001 9002	43002 C	spare glass PMMA, frosted

## Rope Supported LED Light Fitting Series 59 ...

### Application:

Passage streets, main roads etc.

### Design:

**Housing:** Die-cast aluminium, 2-parts, charcoal powder coated DB 702N (mica-iron). **Lower section** with LED-Module, optic, glass cover and ECG, tool less hingeable and detachable. **Upper section** with bracket, adjustment of inclination, cable entry with pressure compensation system.

**Glass cover:** Flat safety glass, Impact

resistance IK10.

**Light distribution:** Symmetrical wide beam.

**Connecting terminal:** With plug-in connection in junction box between upper and lower section, toolless separation of upper and lower section.

**Mounting:** Stainless steel. Turnable (all directions) and adjustable by 15°, mountable on ropes of 6 - 12mm diameter.

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

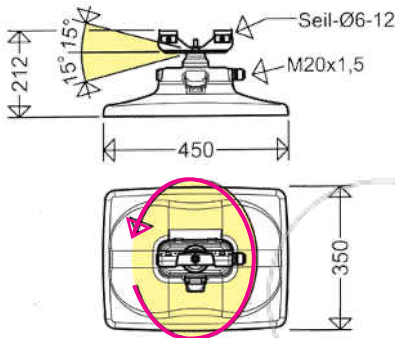
**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Options:

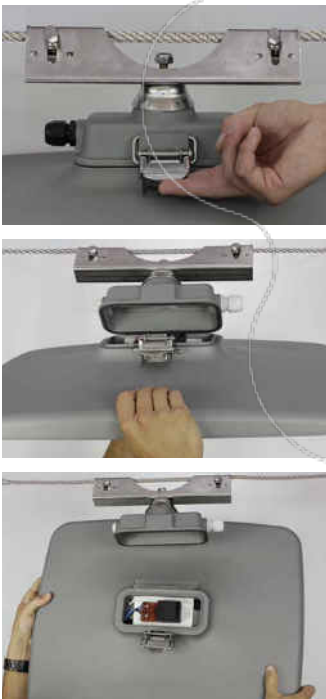
- 3,000K (light-colour 730)
- 1,800K (light colour „Amber“) – protection class II
- seawater resistant
- Light Management System (LIMAS)
- 3-point supporting bracket (49/3P)
- special painting in RAL or DB colours

### Schuch Quality – your advantage

- **high quality, reliable at long time application**
  - high system life time due to use of high-quality ECGs and LED modules
  - ECG with surge voltage resistance, reliable due to excess temperature protection, overload and short circuit protection
  - optimized thermal management due to direct adaption of the LED modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
  - long-lasting, corrosion resistant die-cast aluminium housing with plain surface. Deposit of greenery and dirt is not possible
  - integrated pressure compensation system for defined „Breathing“ avoids condensation water within the fitting
  - version in protection class II with integrated ESD protection for mounting to ropes without metallic contact to the earth potential (e.g., ropes attached to masonry or wood)
- **easy to install, to maintain and to retrofit**
  - time- and cost-saving mounting in 2 steps due to tool less removable lower part of the housing:
  - 1st step:** Hinge upper part with bracket onto the rope and connect the mains
  - 2nd step:** Hinge lower part, connect isolating plug, shut the housing and close. **READY**
  - **universal usage** on cross- and longitudinal ropes, inclined ropes or 3-point rope supports (see accessories) due to all-side rotatable and up to 15° inclinable stainless steel bracket
  - tool less disconnection (also electrical!) of the lower part from the upper part allows a comfortable replacement of the components at site or in the workshop, extensive dismantling of the fitting or uncomfortable “over-head working” is not necessary
- **uncompromisingly energy efficient, economic and eco-friendly**
  - efficient and optimal light distribution due to highly efficient lens optics
  - homogeneous illumination due to the Multi-Layer technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping. No dark zones in the road if any single LED would fail and the uniformity of the illumination is kept.
  - eco-friendly, no light emission into the upper half-space. „Dark-Sky“ requirements are fulfilled
  - future proof by using standardized LED-modules (Zhaga)



### Outstanding mounting advantage



### Notes:

**Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.**

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article No.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]*	Constant luminous flux function (CL)	Light output reduction (LR)**	Power efficiency class	Weight [kg] (without packing material)
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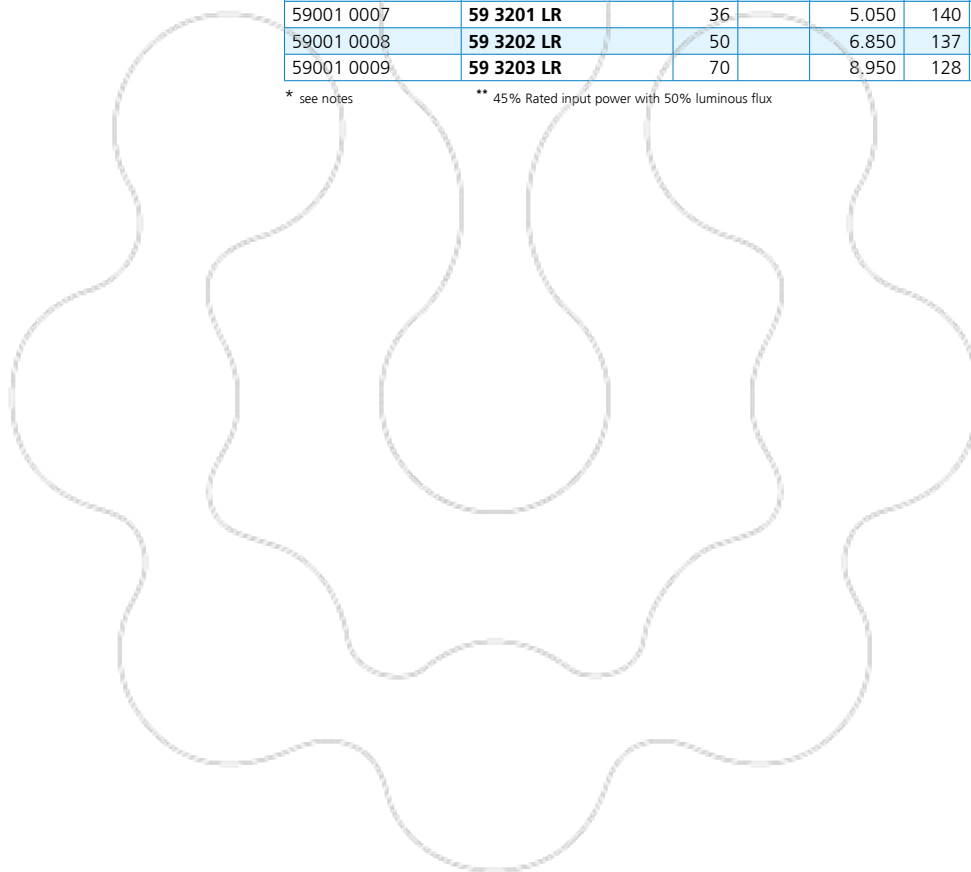
**59...**



59001 0021	<b>59 1601</b>	19		2.630	138			A++	6,6
59001 0022	<b>59 1602</b>	26		3.580	138			A++	6,6
59001 0023	<b>59 1603</b>	36		4.710	131			A++	6,6
59001 0001	<b>59 3201</b>	36		5.050	140			A++	7,0
59001 0002	<b>59 3202</b>	50		6.850	137			A++	7,0
59001 0003	<b>59 3203</b>	70		8.950	128			A++	7,0
59001 0024	<b>59 1601 CL</b>	15	19	2.100	140	•		A++	6,6
59001 0025	<b>59 1602 CL</b>	21	26	2.860	136	•		A++	6,6
59001 0026	<b>59 1603 CL</b>	29	36	3.770	130	•		A++	6,6
59001 0004	<b>59 3201 CL</b>	29	36	4.040	139	•		A++	7,0
59001 0005	<b>59 3202 CL</b>	40	50	5.480	137	•		A++	7,0
59001 0006	<b>59 3203 CL</b>	56	70	7.160	128	•		A++	7,0
59001 0027	<b>59 1601 LR</b>	19		2.630	138		•	A++	6,6
59001 0028	<b>59 1602 LR</b>	26		3.580	138		•	A++	6,6
59001 0029	<b>59 1603 LR</b>	36		4.710	131		•	A++	6,6
59001 0007	<b>59 3201 LR</b>	36		5.050	140		•	A++	7,0
59001 0008	<b>59 3202 LR</b>	50		6.850	137		•	A++	7,0
59001 0009	<b>59 3203 LR</b>	70		8.950	128		•	A++	7,0

\* see notes

\*\* 45% Rated input power with 50% luminous flux



## Accessories / Spare Parts

Article no.	Type	
49001 9003	<b>59/010</b>	flat safety glass
49001 9002	<b>49/3P</b>	3-point mounting

## Rope Supported LED Light Fitting Series 49 ...

### Application:

Passage streets, main roads etc.

### Design:

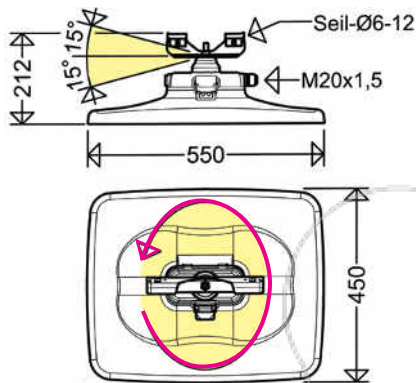
**Housing:** Die-cast aluminium, 2-parts, charcoal powder coated DB 702N (mica-iron). **Lower section** with LED-Module, optic, glass cover and ECG, tool less hingeable and detachable. **Upper section** with bracket, adjustment of inclination, cable entry with pressure compensation system.

**Glass cover:** Flat safety glass, Impact resistance IK10.

**Light distribution:** Symmetrical wide beam.

**Connecting terminal:** With plug-in connection in junction box between upper and lower section, toolless separation of upper and lower section.

**Mounting:** Stainless steel. Turnable (all directions) and adjustable by 15°, mountable on ropes of 6 - 12mm diameter.



### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

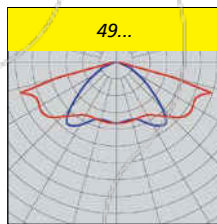
**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V; 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

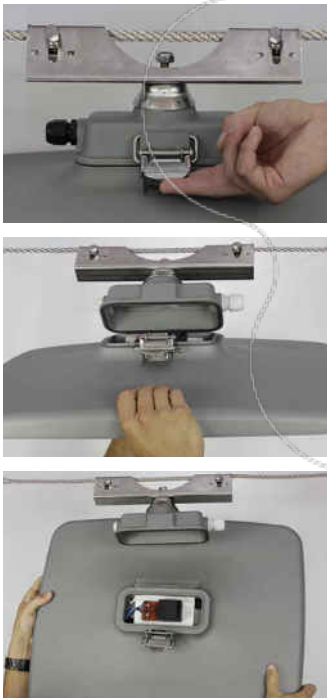
**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Options:

- 3,000 K (light-colour 730)
- 1,800K (light colour „Amber“)
- protection class II
- seawater resistant version
- Light Management System (LIMAS)
- 3-point supporting bracket (49/3P)
- special painting in RAL or DB colours



### Outstanding mounting advantage



### Schuch Quality – your advantage

- **high quality, reliable at long time application**
  - high system life time due to use of high-quality ECGs and LED modules
  - ECG with surge voltage resistance, reliable due to excess temperature protection, overload and short circuit protection
  - optimized thermal management due to direct adaption of the LED modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
  - long-lasting, corrosion resistant die-cast aluminium housing with plain surface. Deposit of greenery and dirt is not possible
  - integrated pressure compensation system for defined „Breathing“ avoids condensation water within the fitting
  - version in protection class II with integrated ESD protection for mounting to ropes without metallic contact to the earth potential (e.g., ropes attached to masonry or wood)
- **easy to install, to maintain and to retrofit**
  - time- and cost-saving mounting in 2 steps due to tool less removable lower part of the housing:
    - 1st step:** Hinge upper part with bracket onto the rope and connect the mains.
    - 2nd step:** Hinge lower part, connect isolating plug, shut the housing and close. **READY**
  - universal usage on cross- and longitudinal ropes, inclined ropes or 3-point rope supports (see accessories) due to all-side rotatable and up to 15° inclinable stainless steel bracket
  - tool less disconnection (also electrical!) of the lower part from the upper part allows a comfortable replacement of the components at site or in the workshop, extensive dismantling of the fitting or uncomfortable „over-head working“ is not necessary
- **uncompromisingly energy efficient, economic and eco-friendly**
  - efficient and optimal light distribution due to highly efficient lens optics
  - homogeneous illumination due to the Multi-Layer technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping. No dark zones in the road if any single LED would fail and the uniformity of the illumination is kept.
  - eco-friendly, no light emission into the upper half-space. „Dark-Sky“ requirements are fulfilled
- **future proof by using standardized LED-modules (Zhaga)**

### Notes:

**Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.**

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W] *	Constant luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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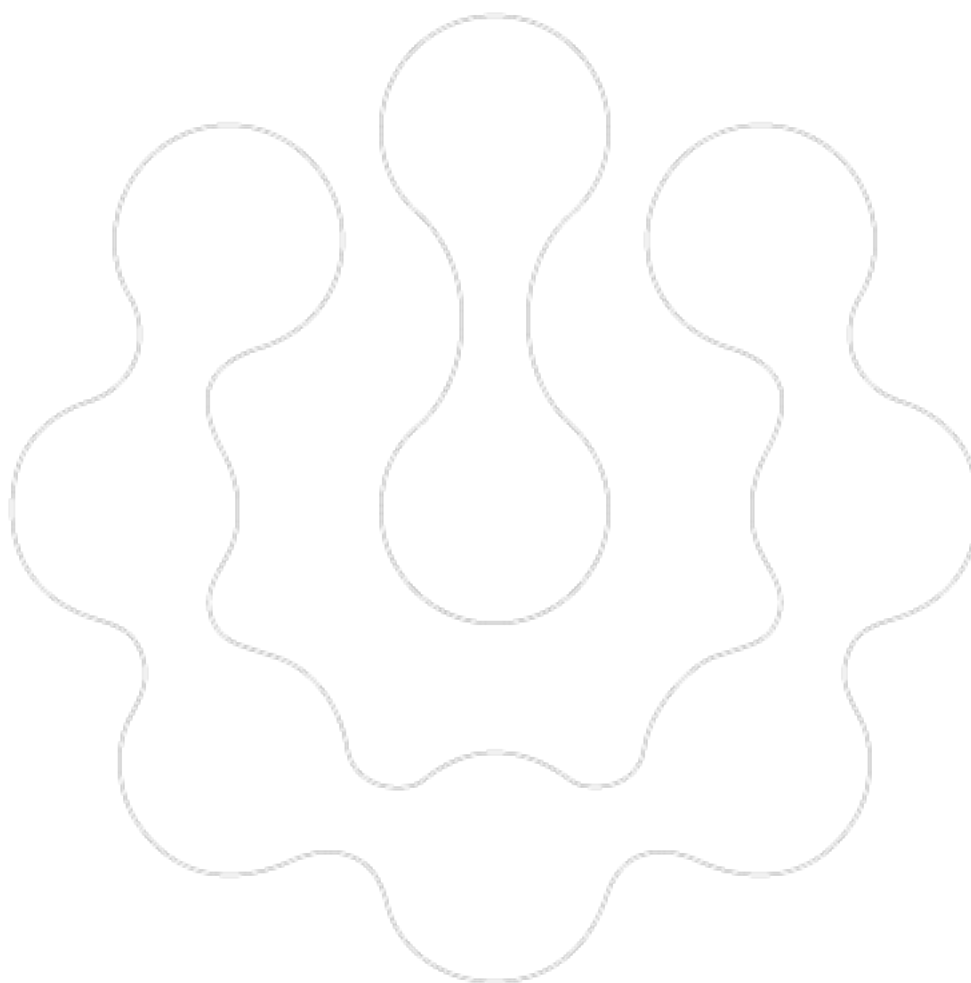
49...



49000 0054	<b>49 6401</b>	69		10.030	145			A++	11,8
49000 0055	<b>49 6402</b>	97		13.630	141			A++	11,8
49000 0056	<b>49 6403</b>	137		17.680	129			A++	11,8
49000 0074	<b>49 6401 CL</b>	55	69	8.020	146	•		A++	11,8
49000 0075	<b>49 6402 CL</b>	78	97	10.900	140	•		A++	11,8
49000 0076	<b>49 6403 CL</b>	110	137	14.140	129	•		A++	11,8
49000 0064	<b>49 6401 LR</b>	69		10.030	145		•	A++	11,8
49000 0065	<b>49 6402 LR</b>	97		13.630	141		•	A++	11,8
49000 0066	<b>49 6403 LR</b>	137		17.680	129		•	A++	11,8

\* see notes

\*\* 45% Rated input power with 50% luminous flux



## Accessories / Spare Parts

Article no.	Type	
49001 9001	<b>49/010</b>	flat safety glass
49001 9002	<b>49/3P</b>	3-point mounting

## LED-Polyester Outdoor Light Fitting Series 287...

### Application:

By-roads and main, thoroughfares etc.

### Design:

**Housing:** Glass fibre reinforced polyester resin.

**Cover:** Clear, pearled acrylic glass (PMMA), hinged and detachable, silicon gasket

**Closure:** Internal central closing device, latches and operating lever made from

stainless steel.

**Reflector:** White sheet steel carrying all electrical components with additional elements for glare limitation, hinged and detachable, plug-type device to the mains connection terminal in the housing.

**Mounting system:** On outreach end sections of 42 x 250 (287 06L) 42 x 400 (287 12L).

### Electrical design:

**LED module:** Zhaga compliant, neutral white, 4,000K,  $R_a > 80$ , lifetime  $L_{80}$  60,000h.

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%)

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Options:

– protection class II

### SCHUCH Quality – your advantage:

- highest efficiency
- high system life time due to use of high-quality components
- ECG with high over-voltage protection reliable due to overload, short circuit and over temperature protection
- fast to maintain or to change components
- high energy saving compared to existing installation with fluorescent lamps
- further energy saving via the life of the LED by the Constant luminous flux function (CL). No luminous flux decrease due to the omission of the usual oversizing in new plans.
- future proof by using standardized LED-modules (Zhaga)

Article No.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Lightoutput reduction	Constant luminous flux function **	Energy efficiency class	Weight [kg] (without packingmaterial)
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### 287...

		LED	IP54	LPH	6-8m	Wind load area A = 0,12m² (287 06L...) A = 0,19m² (287 12L...)			
28703 0001	287 06L42	30		4.280	143			A++	5,5
28703 0002	287 06L42 CL	24	30	3.420	143	•		A++	5,5
28703 0003	287 06L42 LR	30		4.280	143		•	A++	5,5
28703 0004	287 12L42	30		4.300	143			A++	8,0
28703 0005	287 12L42 CL	24	30	3.440	143	•		A++	8,0
28703 0006	287 12L42 LR	30		4.300	143		•	A++	8,0
28703 0007	287 12L60	45		6.380	142			A++	8,5
28703 0008	287 12L60 CL	36	45	5.100	142	•		A++	8,5
28703 0009	287 12L60 LR	45		6.380	142		•	A++	8,5

\* see notes

\*\* 45% Rated input power with 50% luminous flux

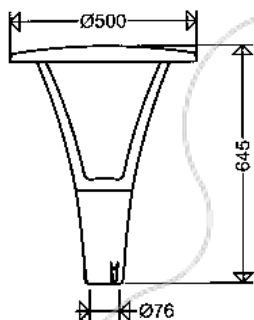
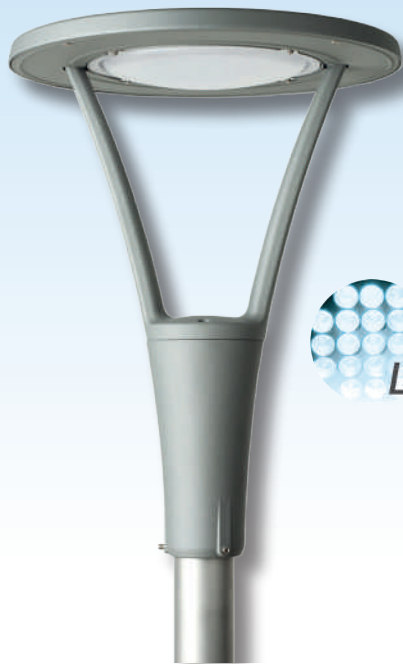
### Accessories / Spare Parts

Article no.	Type	
28701 9000	287020	spare glass for 287 06L...
28701 9001	287040	spare glass for 287 12L...

### Notes:

**Limitations for LED-light fittings:** See chapter „Use of LED lighting in corrosive atmospheres“ in the Technical Appendix.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## KONIC LED Pole-Top Light Fitting Series 544...

#### Application:

544.. ABX and ... AB:

Residential areas, residential and side roads, low traffic areas, footpaths and cycle tracks etc.

544... R:

Promenades, public parks, pedestrian areas etc.

#### Design:

Housing: Die-cast aluminium, threepart, powder coated DB 702N (iron mica).

Lower section with electrical components, cable entry, plug-type device and cable retainer for connection cable.

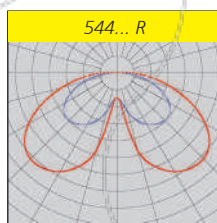
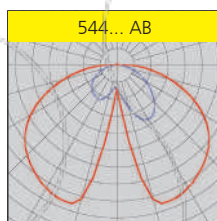
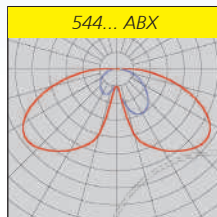
Tie bars with cable feed-through.

Upper part with LED modules and optics.

Cover: Acrylic glass (PMMA), frosted.

Light distribution: Asymmetrical extremely wide beam (ABX), asymmetrical wide beam (AB) or symmetrical circular beam (R).

Mounting system: 3 non-corrosive steel attachment screws serve for fixation on straight pole end Ø of 76mm. Adapter (RZ 1) for pole end Ø of 60mm (see accessories).



#### Electrical design:

LED module: Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

ECG: 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

Note: Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

#### Output reduction:

**With control phase (LR)**: For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA)**: Autonomic dimming by integrated timer.

Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL)**: Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

#### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- asymmetrical beam (A)
- protection class I
- seawater resistant version

- acrylic glass (PMMA), clear
- with high luminous flux up to 8.000lm
- with high luminous flux up to 8.000lm
- special coating in RAL colours

### Schuch Quality – your advantage:

#### high quality, reliable at long time application

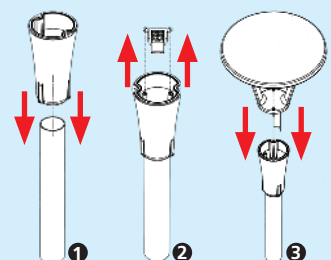
- high system life time due to use of high-quality ECGs and LED modules
- ECG with surge voltage resistance, reliable due to overload, short-circuit and over temperature protection
- optimized thermal management due to direct adaption of the LED modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- long-lasting, corrosion resistant aluminium housing with plain surface

#### uncompromisingly energy efficient and eco-friendly

- constant high luminous flux over the life of the LED due to Constant luminous flux function (types CL).
- optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
- good glare limitation due to frosted cover

#### easy to install, to maintain and to retrofit

- removable upper part of the housing allows a time- and cost-saving mounting, mains connection terminal within the supporting section
- fast maintenance due to an easily interchangeable gear-tray system (modular concept) within the supporting section, ECG can be replaced on-site
- upgrades or converts in regards to technical development of the LED without problems by change of the upper-part of the housing, after the change of the LED modules the upper part of the housing can be used again
- future proof by using standardized LED-modules (Zhaga)



Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]	Constant luminous flux function (CL)	Light output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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## 544... ABX



### asymmetrical extremely wide beam

54400 0001	544 0801ABX	11		1.170	106			A++	9,5
54400 0002	544 0802ABX	14		1.600	114			A++	9,5
54400 0003	544 0803ABX	20		2.110	106			A++	9,5
54400 0004	544 1601ABX	19		2.340	123			A++	9,6
54400 0005	544 1602ABX	26		3.190	123			A++	9,6
54400 0006	544 1603ABX	36		4.170	116			A++	9,6
54400 0007	544 2401ABX	28		3.480	124			A++	9,7
54400 0008	544 2402ABX	39		4.710	121			A++	9,7
54400 0009	544 2403ABX	54		6.170	114			A++	9,7

### ... with uniform luminous flux function

54400 0022	544 0802ABX CL	11	14	1.280	116	•		A++	9,5
54400 0023	544 0803ABX CL	16	20	1.680	105	•		A++	9,5
54400 0024	544 1601ABX CL	15	19	1.870	125	•		A++	9,6
54400 0025	544 1602ABX CL	21	26	2.550	121	•		A++	9,6
54400 0026	544 1603ABX CL	29	36	3.330	115	•		A++	9,6
54400 0027	544 2401ABX CL	22	28	2.780	126	•		A++	9,7
54400 0028	544 2402ABX CL	31	39	3.770	122	•		A++	9,7
54400 0029	544 2403ABX CL	43	54	4.940	115	•		A++	9,7

### ... with light output reduction

54400 0032	544 0802ABX LR	14		1.600	114		•	A++	9,5
54400 0033	544 0803ABX LR	20		2.110	106		•	A++	9,5
54400 0034	544 1601ABX LR	19		2.340	123		•	A++	9,6
54400 0035	544 1602ABX LR	26		3.190	123		•	A++	9,6
54400 0036	544 1603ABX LR	36		4.170	116		•	A++	9,6
54400 0037	544 2401ABX LR	28		3.480	124		•	A++	9,7
54400 0038	544 2402ABX LR	39		4.710	121		•	A++	9,7
54400 0039	544 2403ABX LR	54		6.170	114		•	A++	9,7

## 544... AB



### asymmetrical wide beam distribution

54400 0104	544 1601AB	19		2.310	122			A++	9,6
54400 0105	544 1602AB	26		3.140	121			A++	9,6
54400 0106	544 1603AB	36		4.110	114			A++	9,6
54400 0107	544 3201AB	36		4.560	127			A++	9,8
54400 0108	544 3202AB	50		6.190	124			A++	9,8

### ... with uniform luminous flux function

54400 0124	544 1601AB CL	15	19	1.850	123	•		A++	9,6
54400 0125	544 1602AB CL	21	26	2.510	120	•		A++	9,6
54400 0126	544 1603AB CL	29	36	3.290	113	•		A++	9,6
54400 0127	544 3201AB CL	29	36	3.650	126	•		A++	9,8
54400 0128	544 3202AB CL	40	50	4.950	124	•		A++	9,8

### ... with light output reduction

54400 0134	544 1601AB LR	19		2.310	122		•	A++	9,6
54400 0135	544 1602AB LR	26		3.140	121		•	A++	9,6
54400 0136	544 1603AB LR	36		4.110	114		•	A++	9,6
54400 0137	544 3201AB LR	36		4.560	127		•	A++	9,8
54400 0138	544 3202AB LR	50		6.190	124		•	A++	9,8

\*see notes \*\*45% Rated input power with 50% luminous flux



Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]	Constant luminous flux function (CL)	Light output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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## 544... R



### symmetrical circular beam

54400 0201	544 0801R	11		1.150	105			A++	9,6
54400 0202	544 0802R	14		1.570	112			A++	9,6
54400 0203	544 0803R	20		2.070	104			A++	9,6
54400 0204	544 1601R	19		2.310	122			A++	9,7
54400 0205	544 1602R	26		3.150	121			A++	9,7
54400 0206	544 1603R	36		4.120	114			A++	9,7
54400 0207	544 2401R	28		3.440	123			A++	9,7
54400 0208	544 2402R	39		4.660	119			A++	9,7
54400 0209	544 2403R	54		6.110	113			A++	9,7

### ... with uniform luminous flux function

54400 0222	544 0802R CL	11	14	1.260	115	•		A++	9,7
54400 0223	544 0803R CL	16	20	1.660	104	•		A++	9,7
54400 0224	544 1601R CL	15	19	1.850	123	•		A++	9,8
54400 0225	544 1602R CL	21	26	2.520	120	•		A++	9,8
54400 0226	544 1603R CL	29	36	3.290	113	•		A++	9,8
54400 0227	544 2401R CL	22	28	2.750	125	•		A++	9,8
54400 0228	544 2402R CL	31	39	3.730	120	•		A++	9,8
54400 0229	544 2403R CL	43	54	4.880	113	•		A++	9,8

### ... with light output reduction

54400 0302	544 0802R LR	14		1.570	112		•	A++	9,7
54400 0303	544 0803R LR	20		2.070	104		•	A++	9,7
54400 0304	544 1601R LR	19		2.310	122		•	A++	9,8
54400 0305	544 1602R LR	26		3.150	121		•	A++	9,8
54400 0306	544 1603R LR	36		4.120	114		•	A++	9,8
54400 0307	544 2401R LR	28		3.440	123		•	A++	9,8
54400 0308	544 2402R LR	39		4.660	119		•	A++	9,8
54400 0309	544 2403R LR	54		6.110	113		•	A++	9,8

\*see notes

\*\*45% Rated input power with 50% luminous flux

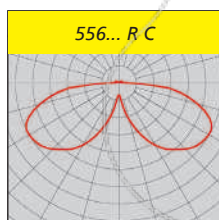
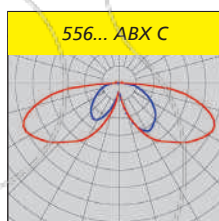
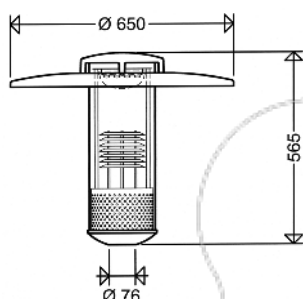


## Accessories / Spare Parts

Article no.	Type	
90544 9000	10044	spare glass PMMA frosted



Picture: Special paint colour jet black (RAL 9005)



without frosted cover



without louver stack (C OR)

## CUPINA Pole-Top LED-Light Fitting Series 556...

### Application:

556... ABX:

Residential areas, residential and side roads, low traffic areas, footpaths and cycle tracks etc.

556... R:

Promenades, public parks, pedestrian areas etc.

### Design :

Roof and supporting section: Aluminium, powder-coated DB 702N (iron mica).

Cover: PMMA, clear, cylindrical.

Electrical kit: Ready wired for installation, plug-type device to the mains connection terminal, cable retainer for connection

cable, with LED module, frosted cover, heat sink and ECG.

Light distribution: Asymmetrical extremely wide beam (ABX) or circular beam (R).

Light diffuser: Optic and anodized pure aluminium louver stack, frosted cover for glare limitation.

Mounting system: 3 noncorrosive steel attachment screws serve for fixation on straight poles Ø 76 mm. + (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).

### Electrical design:

LED module: Zhaga compliant, 4,000K,  $R_g > 70$ , lifetime  $L_{80}$  100,000h

ECG: 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

Note: Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

With control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

Without control phase (LA): Autonomic dimming by integrated timer.

Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- protection class I
- Light Management System (LIMAS)
- seawater resistant version
- without louver stack (OR)

- without frosted cover (appr. 10% higher luminous flux)
- with higher luminous flux
- special coating in other RAL- and DB-colours

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

### Schuch Quality – your advantage

- high system life time due to the use of high-quality components
- ECG with high surge voltage resistance, reliable due to overheating, overload and short-circuit protection
- optimal light distribution due to direct beam LED with high efficient optic
- excellent glare limitation due to frosted coverage of the LED module
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LED are overlapping. Any failure of a particular single LED will not create any dark zones in the road. The uniformity of the illumination is kept
- quick maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- future proof by using standardized LED-modules (Zhaga)

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]*	Uniform luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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## 556... C



### asymmetrical extremely wide beam

11556 0060	556 0801ABX C	11		1.100	100			A++	6,7
11556 0061	556 0802ABX C	14		1.500	107			A++	6,7
11556 0062	556 0803ABX C	20		1.950	98			A++	6,7
11556 0063	556 1601ABX C	19		2.220	117			A++	6,8
11556 0064	556 1602ABX C	26		2.980	115			A++	6,8
11556 0067	556 0802ABX C CL	11	14	1.200	109	•		A++	6,7
11556 0068	556 0803ABX C CL	16	20	1.560	98	•		A++	6,7
11556 0069	556 1601ABX C CL	15	19	1.780	119	•		A++	6,8
11556 0070	556 1602ABX C CL	21	26	2.390	114	•		A++	6,8
11556 0073	556 0802ABX C LR	14		1.500	107		•	A++	6,7
11556 0074	556 0803ABX C LR	20		1.950	98		•	A++	6,7
11556 0075	556 1601ABX C LR	19		2.220	117		•	A++	6,8
11556 0076	556 1602ABX C LR	26		2.980	115		•	A++	6,8

### symmetrical circular beam

11556 0078	556 0801R C	11		1.120	102			A++	6,7
11556 0079	556 0802R C	14		1.520	109			A++	6,7
11556 0080	556 0803R C	20		1.970	99			A++	6,7
11556 0081	556 1601R C	19		2.230	117			A++	6,8
11556 0082	556 1602R C	26		3.000	115			A++	6,8
11556 0085	556 0802R C CL	11	14	1.220	111	•		A++	6,7
11556 0086	556 0803R C CL	16	20	1.580	99	•		A++	6,7
11556 0087	556 1601R C CL	15	19	1.790	119	•		A++	6,8
11556 0088	556 1602R C CL	21	26	2.400	114	•		A++	6,8
11556 0091	556 0802R C LR	14		1.520	109		•	A++	6,7
11556 0092	556 0803R C LR	20		1.970	99		•	A++	6,7
11556 0093	556 1601R C LR	19		2.230	117		•	A++	6,8
11556 0094	556 1602R C LR	26		3.000	115		•	A++	6,8

\* see notes

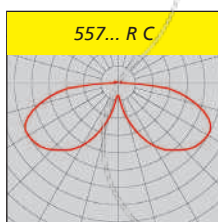
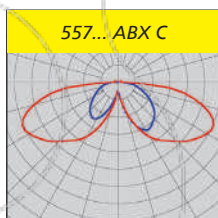
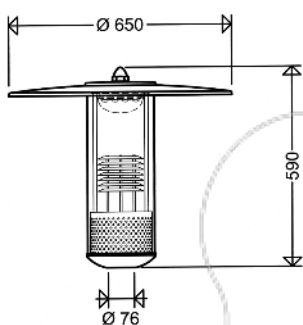
\*\* 50% luminous flux at 45% power consumption

## Accessories / Spare Parts

Article no.	Type	
10051 9000	10051	clear PMMA glass cover, cylindrical.
10041 9001	10041 C	frosted cover for glare limitation
90116 9003	RS 543 LED	louver stack, aluminium, LED design for series 543/553/556...
90126 0001	RZ 1 schwarz	adapter for pole-top Ø 60mm



With frosted cover for glare limitation.



without frosted cover



without louver stack (OR)

## PLANE0 Pole-Top LED-Light Fitting Series 557...

### Application:

557... ABX:

Residential areas, residential and side roads, low traffic areas, footpaths and cycle tracks etc.

557... R:

Promenades, public parks, pedestrian areas etc.

### Design :

Roof and supporting section: Aluminium, powder-coated DB 702N (iron mica).

Cover: PMMA, clear, cylindrical.

Electrical kit: Ready wired for installation, plug-type device to the mains connection

terminal, cable retainer for connection cable, with LED module, frosted cover, heat sink and ECG.

Light distribution: Asymmetrical extremely wide beam (ABX) or circular beam (R).

Light diffuser: LED optic and anodized pure aluminium louver stack.

Mounting system: 3 noncorrosive steel attachment screws serve for fixation on straight poles Ø 76 mm. + (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).

### Electrical design:

LED module: Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

ECG: 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

Note: Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- protection class I
- Light Management System (LIMAS)
- seawater resistant version
- without frosted cover (appr. 10%

- higher luminous flux)
- without louver stack (OR)
- with higher luminous flux
- special coating in other RAL- and DB-colours

### Schuch Quality – your advantage

- high system life time due to the use of high-quality components
- ECG with surge voltage resistance 10kV, reliable due to overheating, overload and short-circuit protection
- optimal light distribution due to direct beam LED with high efficient optic
- excellent glare limitation due to frosted coverage of the LED module
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LED are overlapping. Any failure of a particular single LED will not create any dark zones in the road. The uniformity of the illumination is kept
- quick maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]*	Uniform luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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## 557... C



### asymmetrical extremely wide beam

55700 0040	557 0801ABX C	11		1.100	100			A++	5,9
55700 0041	557 0802ABX C	14		1.500	107			A++	5,9
55700 0042	557 0803ABX C	20		1.950	98			A++	5,9
55700 0043	557 1601ABX C	19		2.220	117			A++	6,0
55700 0044	557 1602ABX C	26		2.980	115			A++	6,0
55700 0047	557 0802ABX C CL	11	14	1.200	109	•		A++	5,9
55700 0048	557 0803ABX C CL	16	20	1.560	98	•		A++	5,9
55700 0049	557 1601ABX C CL	15	19	1.780	119	•		A++	6,0
55700 0050	557 1602ABX C CL	21	26	2.390	114	•		A++	6,0
55700 0053	557 0802ABX C LR	14		1.500	107		•	A++	5,9
55700 0054	557 0803ABX C LR	20		1.950	98		•	A++	5,9
55700 0055	557 1601ABX C LR	19		2.220	117		•	A++	6,0
55700 0056	557 1602ABX C LR	26		2.980	115		•	A++	6,0

### symmetrical circular beam

55700 0058	557 0801R C	11		1.120	102			A++	5,9
55700 0059	557 0802R C	14		1.520	109			A++	5,9
55700 0060	557 0803R C	20		1.970	99			A++	5,9
55700 0061	557 1601R C	19		2.230	117			A++	6,0
55700 0062	557 1602R C	26		3.000	115			A++	6,0
55700 0065	557 0802R C CL	11	14	1.220	111	•		A++	5,9
55700 0066	557 0803R C CL	16	20	1.580	99	•		A++	5,9
55700 0067	557 1601R C CL	15	19	1.790	119	•		A++	6,0
55700 0068	557 1602R C CL	21	26	2.400	114	•		A++	6,0
55700 0071	557 0802R C LR	14		1.520	109		•	A++	5,9
55700 0072	557 0803R C LR	20		1.970	99		•	A++	5,9
55700 0073	557 1601R C LR	19		2.230	117		•	A++	6,0
55700 0074	557 1602R C LR	26		3.000	115		•	A++	6,0

\* see notes

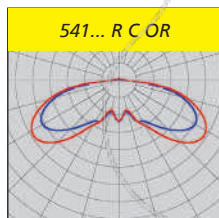
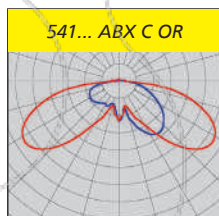
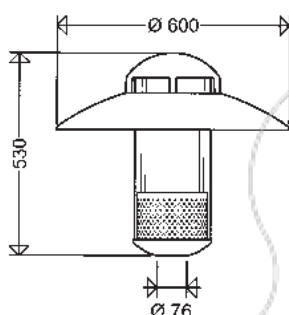
\*\* 50% luminous flux at 45% power consumption

## Accessories / Spare Parts

Article no.	Type	
10051 9000	10051	clear PMMA glass cover, cylindrical.
10041 9001	10041 C	frosted cover for glare limitation
90116 9003	RS 543 LED	louver stack, aluminium, LED design for series 543/553/556/557...
90126 0001	RZ 1 schwarz	adapter for pole-top Ø 60mm



With frosted cover  
(without louver stack)



## LED Pole-Top Light Fitting Series 541... C OR

### Application:

#### 541/... /ABX:

Residential areas, residential and side roads, low traffic areas, footpaths and cycle tracks etc.

#### 541/... /R:

Promenades, public parks, pedestrian areas etc.

### Design:

#### Supporting section, roof and top cover:

Aluminium powder coated in jet black (RAL 9005).

Glass cover: Clear, acrylic glass (PMMA).

#### Electrical kit:

Ready wired for installation, plug-type

device to the mains connection terminal, cable retainer for connection cable, with LED module, heat sink and ECG.

Light distribution: Asymmetrical extremely wide beam (ABX) or symmetrical circular beam (R).

Light diffuser: Frosted cover for glare limitation.

Mounting system: 3 non-corrosive steel attachment screws serve for fixation on straight pole end Ø of 76mm. Adapter (RZ 1) for pole end Ø of 60mm (see accessories).

### Electrical design:

LED module: Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

ECG: 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

Note: Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

#### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer.

Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- protection class I
- Light Management System (LIMAS)
- seawater resistant version
- without frosted coverage for glare limitation (appr. 9% higher luminous flux)
- with louver stack (appr. 10% lower luminous flux)
- with higher luminous flux
- special coating in RAL colours



with louver stack (C)



without frosted cover (OR)

### Schuch Quality – your advantage

- high system life time due to the use of high-quality components
- ECG with surge voltage resistance 10kV, reliable due to overheating, overload and short-circuit protection
- optimal light distribution due to direct beam LED with high efficient optic
- excellent glare limitation due to frosted coverage of the LED module
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LED are overlapping. Any failure of a particular single LED will not create any dark zones in the road. The uniformity of the illumination is kept
- quick maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]	Constant luminous flux function (CL)	Light output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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## 541... C OR



### asymmetrical extremely wide beam

11541 0102	541 0801ABX C OR	11		1.110	101			A++	7,1
11541 0103	541 0802ABX C OR	14		1.510	108			A++	7,1
11541 0104	541 0803ABX C OR	20		1.970	99			A++	7,1
11541 0105	541 1601ABX C OR	19		2.220	117			A++	7,2
11541 0106	541 1602ABX C OR	26		2.990	115			A++	7,2
11541 0109	541 0802ABX C OR CL	11	14	1.210	110	•		A++	7,1
11541 0110	541 0803ABX C OR CL	16	20	1.570	98	•		A++	7,1
11541 0111	541 1601ABX C OR CL	15	19	1.770	118	•		A++	7,2
11541 0112	541 1602ABX C OR CL	21	26	2.390	114	•		A++	7,2
11541 0115	541 0802ABX C OR LR	14		1.510	108		•	A++	7,1
11541 0116	541 0803ABX C OR LR	20		1.970	99		•	A++	7,1
11541 0117	541 1601ABX C OR LR	19		2.220	117		•	A++	7,2
11541 0118	541 1602ABX C OR LR	26		2.990	115		•	A++	7,2

### symmetrical circular beam

11541 0120	541 0801R C OR	11		1.120	102			A++	7,1
11541 0121	541 0802R C OR	14		1.520	109			A++	7,1
11541 0122	541 0803R C OR	20		1.980	99			A++	7,1
11541 0123	541 1601R C OR	19		2.220	117			A++	7,2
11541 0124	541 1602R C OR	26		2.990	115			A++	7,2
11541 0127	541 0802R C OR CL	11	14	1.220	111	•		A++	7,1
11541 0128	541 0803R C OR CL	16	20	1.580	99	•		A++	7,1
11541 0129	541 1601R C OR CL	15	19	1.780	119	•		A++	7,2
11541 0130	541 1602R C OR CL	21	26	2.390	114	•		A++	7,2
11541 0133	541 0802R C OR LR	14		1.520	109		•	A++	7,1
11541 0134	541 0803R C OR LR	20		1.980	99		•	A++	7,1
11541 0135	541 1601R C OR LR	19		2.220	117		•	A++	7,2
11541 0136	541 1602R C OR LR	26		2.990	115		•	A++	7,2

\* see notes

\*\* 45% power consumption/ 50% luminous flux

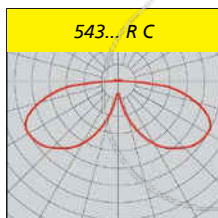
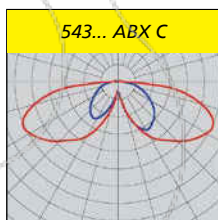
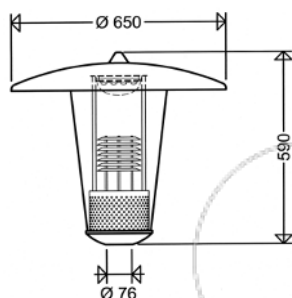


## Accessories / Spare Parts

Article no.	Type	
10041 9000	10041	spare cover
10041 9001	10041 C	glare limitation cover
90113 0002	HA 08	visor to avoid backwards luminous flux
90116 9002	RS LED	louver stack, aluminium
90126 0001	RZ 1 schwarz	adapter for pole-top Ø of 60 mm, black



With frosted cover for glare limitation.



## Pole-Top LED-Light Fitting Series 543... C

### Application:

#### 543... ABX:

Residential areas, residential and side roads, low traffic areas, footpaths and cycle tracks etc.

#### 543... R:

Promenades, public parks, pedestrian areas etc.

### Design :

**Roof:** Glass fibre reinforced polyester resin with integrated insert nut (colour: similar to RAL 7035).

**Supporting section:** Aluminium powder coated light grey (RAL 7035).

**Cover:** PMMA, clear, conical.

**Louver stack:** Anodized pure aluminium.

**Electrical kit:** Ready wired for installation, plug-type device to the mains connection terminal, cable retainer for connection cable, with LED module, heat sink and ECG.

**Light distribution:** Asymmetrical extremely wide beam (ABX) or circular beam (R).

**Light diffuser:** Anodized pure aluminium louver stack, frosted cover for glare limitation.

**Mounting system:** 3 noncorrosive steel attachment screws serve for fixation on straight poles Ø 76 mm. Adapter (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_g > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer.

Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Options:

– 3,000K (light colour 730)

– 1,800K (light colour „Amber“)

– protection class I

– seawater resistant

– without frosted coverage (appr. 10% higher luminous flux)

– without louver stack OR

– with higher luminous flux

– aluminium roof, standard colour RAL 7035 (series 543... ALU)

– special coating in other RAL-colours



without frosted cover



without louver stack (OR)

### Schuch Quality – your advantage

- high system life time due to the use of high-quality components
- ECG with high surge voltage resistance 10kV, reliable due to overheating, overload and short-circuit protection
- optimal light distribution due to direct beam LED with high efficient optic
- excellent glare limitation due to frosted coverage of the LED module
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LED are overlapping. Any failure of a particular single LED will not create any dark zones in the road. The uniformity of the illumination is kept
- quick maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- eco-friendly, no light emission into the upper half-space. „Dark-Sky“ requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]*	Uniform luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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## 543... C



### asymmetrical extremely wide beam

11543 0030	543 0801ABX C	11		1.100	100			A++	7,0
11543 0033	543 0802ABX C	14		1.500	107			A++	7,0
11543 0046	543 0803ABX C	20		1.950	98			A++	7,0
11543 0010	543 1601ABX C	19		2.220	117			A++	7,1
11543 0055	543 1602ABX C	26		2.980	115			A++	7,1
11543 0047	543 0802ABX C CL	11	14	1.200	109	•		A++	7,0
11543 0048	543 0803ABX C CL	16	20	1.560	98	•		A++	7,0
11543 0036	543 1601ABX C CL	15	19	1.780	119	•		A++	7,1
11543 0038	543 1602ABX C CL	21	26	2.390	114	•		A++	7,1
11543 0049	543 0802ABX C LR	14		1.500	107		•	A++	7,0
11543 0069	543 0803ABX C LR	20		1.950	98		•	A++	7,0
11543 0037	543 1601ABX C LR	19		2.220	117		•	A++	7,1
11543 0018	543 1602ABX C LR	26		2.980	115		•	A++	7,1

### symmetrical circular beam

11543 0070	543 0801R C	11		1.120	102			A++	7,0
11543 0071	543 0802R C	14		1.520	109			A++	7,0
11543 0072	543 0803R C	20		1.970	99			A++	7,0
11543 0039	543 1601R C	19		2.230	117			A++	7,1
11543 0056	543 1602R C	26		3.000	115			A++	7,1
11543 0073	543 0802R C CL	11	14	1.220	111	•		A++	7,0
11543 0074	543 0803R C CL	16	20	1.580	99	•		A++	7,0
11543 0075	543 1601R C CL	15	19	1.790	119	•		A++	7,1
11543 0045	543 1602R C CL	21	26	2.400	114	•		A++	7,1
11543 0076	543 0802R C LR	14		1.520	109		•	A++	7,0
11543 0077	543 0803R C LR	20		1.970	99		•	A++	7,0
11543 0078	543 1601R C LR	19		2.230	117		•	A++	7,1
11543 0079	543 1602R C LR	26		3.000	115		•	A++	7,1

\* see notes

\*\* 50% luminous flux at 45% power consumption

## Accessories / Spare Parts

Article no.	Type	
10043 9000	10043	clear PMMA glass cover, conical
90128 9000	DACH 542/43 POL	spare roof, polyester, for light fittings with separate cover nut (up to 2009/2010)
90128 9001	DACH 542/43 POL M10	spare roof, polyester, for light fittings with integrated cover nut (from 2010)
90127 9000	DACH 542/43 AL	spare roof, aluminium, for light fittings with separate cover nut
90116 9003	RS 543 LED	louver stack, aluminium, LED design for series 543/553...
90044 0001	RZ 1 grau	adapter for pole-top ø 60mm

## Pole-Top LED-Light Fitting Series 553... C

### Application:

#### 553... ABX:

Residential areas, residential and side roads, low traffic areas, footpaths and cycle tracks etc.

#### 553... R:

Promenades, public parks, pedestrian areas etc.

### Design :

**Roof:** Glass fibre reinforced polyester resin with integrated insert nut (colour: similar to RAL 7035).

**Supporting section:** Aluminium powder coated light grey (RAL 7035).

**Cover:** PMMA, clear, cylindrical.

**Electrical kit:** Ready wired for installation,

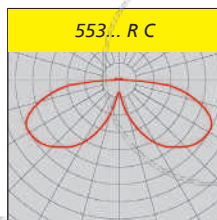
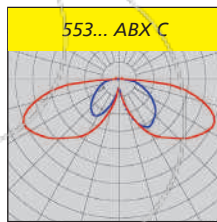
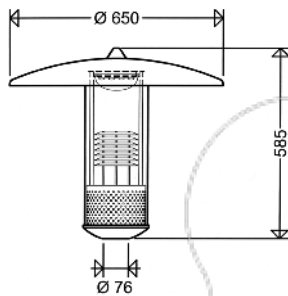
plug-type device to the mains connection terminal, cable retainer for connection cable, with LED module, heat sink and ECG.

**Light distribution:** Asymmetrical extremely wide beam (ABX) or circular beam (R).

**Light diffuser:** Anodized pure aluminium louver stack, frosted cover for glare limitation.

**Mounting system:** 3 noncorrosive steel attachment screws serve for fixation on straight poles Ø 76 mm. Adapter (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).

With frosted cover for glare limitation.



### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_g > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer.

Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- protection class I
- seawater resistant
- without frosted coverage (appr. 10% higher luminous flux)
- without louver stack OR

- with higher luminous flux
- impact resistant PMMA or PC (type 543... only) glass
- aluminium roof, standard colour RAL 7035 (series 543/553... ALU)
- special coating in other RAL-colours



without frosted cover



without louver stack (OR)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

### Schuch Quality – your advantage

- high system life time of 100.000h due to the use of high-quality components
- ECG with surge voltage resistance 10kV, reliable due to overheating, overload and short-circuit protection
- optimal light distribution due to direct beam LED with high efficient optics
- excellent glare limitation due to frosted coverage of the LED module
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LED are overlapping. Any failure of a particular single LED will not create any dark zones in the road. The uniformity of the illumination is kept
- quick maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- eco-friendly, no light emission into the upper half-space. „Dark-Sky“ requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]* Uniform luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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## 553... C



### asymmetrical extremely wide beam

11553 0050	553 0801ABX C	11		1.100	100		A++	7,0
11553 0051	553 0802ABX C	14		1.500	107		A++	7,0
11553 0052	553 0803ABX C	20		1.950	98		A++	7,0
11553 0053	553 1601ABX C	19		2.220	117		A++	7,1
11553 0054	553 1602ABX C	26		2.980	115		A++	7,1
11553 0057	553 0802ABX C CL	11	14	1.200	109	•	A++	7,0
11553 0058	553 0803ABX C CL	16	20	1.560	98	•	A++	7,0
11553 0059	553 1601ABX C CL	15	19	1.780	119	•	A++	7,1
11553 0060	553 1602ABX C CL	21	26	2.390	114	•	A++	7,1
11553 0063	553 0802ABX C LR	14		1.500	107	•	A++	7,0
11553 0064	553 0803ABX C LR	20		1.950	98	•	A++	7,0
11553 0065	553 1601ABX C LR	19		2.220	117	•	A++	7,1
11553 0066	553 1602ABX C LR	26		2.980	115	•	A++	7,1

### symmetrical circular beam

11553 0068	553 0801R C	11		1.120	102		A++	7,0
11553 0069	553 0802R C	14		1.520	109		A++	7,0
11553 0070	553 0803R C	20		1.970	99		A++	7,0
11553 0071	553 1601R C	19		2.230	117		A++	7,1
11553 0072	553 1602R C	26		3.000	115		A++	7,1
11553 0075	553 0802R C CL	11	14	1.220	111	•	A++	7,0
11553 0076	553 0803R C CL	16	20	1.580	99	•	A++	7,0
11553 0077	553 1601R C CL	15	19	1.790	119	•	A++	7,1
11553 0078	553 1602R C CL	21	26	2.400	114	•	A++	7,1
11553 0081	553 0802R C LR	14		1.520	109	•	A++	7,0
11553 0082	553 0803R C LR	20		1.970	99	•	A++	7,0
11553 0083	553 1601R C LR	19		2.230	117	•	A++	7,1
11553 0084	553 1602R C LR	26		3.000	115	•	A++	7,1

\* see notes

\*\* 50% luminous flux at 45% power consumption

## Accessories / Spare Parts

Article no.	Type	
10051 9000	10051	clear PMMA glass cover, cylindrical, series 553...
90128 9001	DACH 542/43 POL M10	spare roof, polyester, for light fittings with integrated cover nut
90127 9000	DACH 542/43 AL	spare roof, aluminium, with separate cover nut
90116 9003	RS 543 LED	louver stack, aluminium, LED design for series 543/553...
90044 0001	RZ 1 grau	adapter for pole-top Ø 60mm

## Pendant LED Luminaires Series 564/565 ...

### Application:

Renewal of villages and historic city centres, low traffic areas, pedestrian areas, promenades, public parks.

### Design:

**Housing:** Aluminium sheet, powder coated in deep black colour (RAL 9005).  
**Cover:** PMMA, clear pearled (P).

**Electro kit:** With equipment of operation

and LED, wired ready for connection, cable retainer for the connection cable.  
**Light distribution:** Asymmetrical extremely wide beam (ABX) or circular beam (R).

**Light diffuser:** Optics.

**Mounting:** To pole top sections with internal thread 3/4".

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Options:

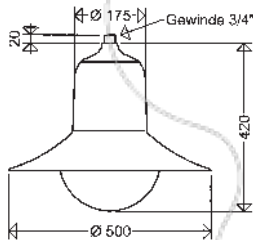
- + 3,000K (light colour 730)
- 1,800K (light colour „Amber“)

- protection class II
- special painting in RAL- or DB- colours

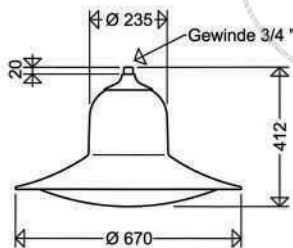
### Schuch Quality – your advantage:

- high system life time due high-quality components
- ECG with high over-voltage protection, reliable due to overload, short circuit and overheating protection
- quick maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- optimal light distribution due to highly efficient lens optics with direct beam
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LED are overlapping. Any failure of a particular single LED will not create any dark zone in the road. The uniformity of the illumination is kept.
- future proof by using standardized LED-modules (Zhaga)

Series 564



Series 565



## 564/565...



Article no.	Type	Luminous flux [lm] *	Power/ consumption W	Luminous efficacy lm/W	Energy efficiency class	Weight [kg] (without packing material)
11564 0003	564 0803ABX	20	2.340	117	A++	3,9
11564 0004	564 0803R	20	2.360	118	A++	3,9
11564 0001	564 1603ABX	36	4.610	128	A++	3,9
11564 0002	564 1603R	36	4.580	127	A++	3,9

LPH 3-5m Wind load area A = 0,09m²

11565 0009	565 1603ABX	36	4.490	125	A++	5,6
11565 0005	565 1603R	36	4.450	124	A++	5,6
11565 0010	565 3203ABX	70	8.660	124	A++	5,7
11565 0006	565 3203R	70	8.560	122	A++	5,7

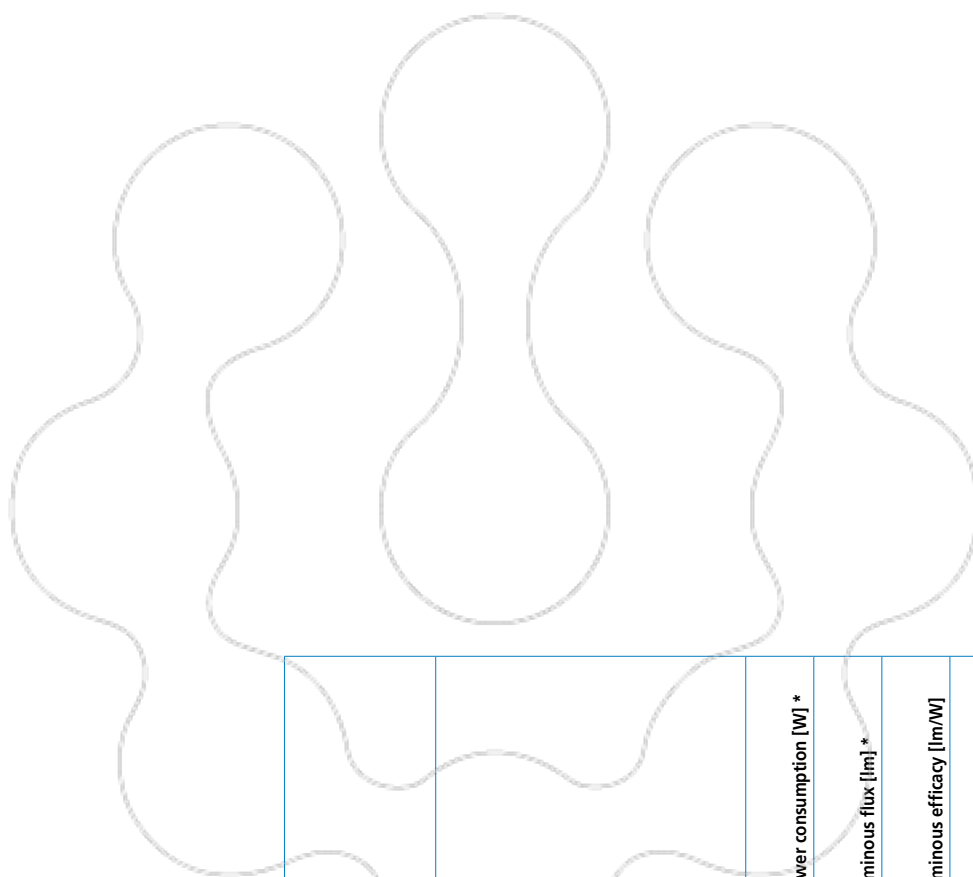
LPH 4-6m Wind load area A = 0,12m²

\* see notes

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article No.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Previous lamps	Energy saving [%]
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### Retrofit Kits US564/US565...

for energy efficient upgrading of conventional installations

11566 0003	US564 1603ABX	36	4.610	128	HME 80W	64
11566 0004	US564 1603R	36	4.580	127	HME 80W	64
10511 0007	US565 1603ABX	36	4.490	125	HME 80W	64
10511 0008	US565 3203ABX	70	8.660	124	HME 125W	51

LED retrofit kits also available with output reduction and Constant luminous flux function (CL)

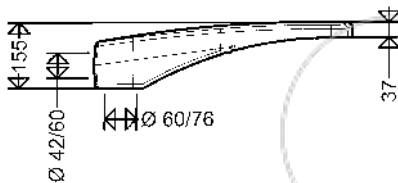
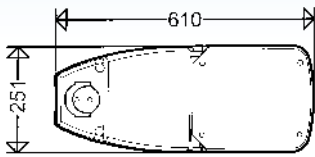
Retrofit kits for high pressure lamps HI/HS on request.

\* see notes

### Accessories / Spare Parts

Article no.	Type	
10064 9003	10064 P LED	PMMA-glass, clear-pearled for 564... LED
10065 9001	10065 P	PMMA-glass, clear-pearled for 565...

## Modern LED Plane Surface Floodlight with Multi-Purpose Mounting System Series 48... A



### Outstanding mounting advantage



### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

### Application:

Car parks, outside facilities, loading areas, loading platforms, gateways, object protection etc.

### Design:

**Housing:** Die-cast aluminium, 2-parts, charcoal coloured metallic matt powder coated (almost DB 702). **Upper section** with LED-Module, optic, glass cover and ECG, hinged and detachable. **Lower section** with pole mounting system, adjustment of inclination, cable retainer, cable entry with pressure compensation system.

**Glass cover:** Flat safety glass, Impact resistance IK08.

**Light distribution:** Asymmetric.

**Connection:** With isolating plug connection.

**Post top or cantilever mounting:** Die-cast aluminium, universal system for post top mounting Ø 60/76mm and side entry mounting Ø 42/60mm x 100mm.

**Wall mounting** with wall bracket.

**Inclination:** Post top mounting 0°, 5° and 10° (standard: 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_g > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

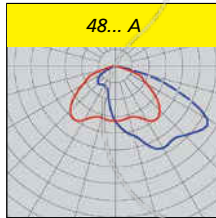
### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer.

Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)



### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- protection class I
- autonomic output reduction without control phase (LA), also available with deviating times and with a second dimming step
- seawater resistant version
- for connection to group or central battery systems (ZB)
- Light Management System (LIMAS)
- screening device to the house side
- special painting in RAL colours

### Schuch Quality – your advantage:

#### high quality, reliable at long time application

- high system life time due to use of high-quality ECGs and LED modules
- ECG with surge voltage resistance, reliable due to overload, short-circuit and over temperature protection
- optimized thermal management due to direct adaption of the LED modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- long-lasting, corrosion resistant die-cast aluminium housing with plain surface
- integrated pressure compensation system for defined „Breathing“ of the fitting

#### easy to install, to maintain and to retrofit

- removable upper part of the housing allows a comfortable, time- and cost-saving mounting in 2 steps:  
**1st step:** Mount bottom part on the pole and connect the mains  
**2nd step:** Hinge upper part, connect isolating plug and shut the housing. **READY**
- tiltable pole mounting system for post top and side entry mounting, no tools required
- adjustable inclination of the light fitting, no tools required
- removable upper part of the housing allows a comfortable maintenance, no painful overhead working. ECG can be replaced on-site
- upgrades or converts in regards to technical development by easy change of the upper-part of the housing. After the change of the LED modules the upper part of the housing can be used again.
- **uncompromisingly energy efficient and eco-friendly**
  - optimal light distribution due to highly efficient optics
  - homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
  - eco-friendly, no light emission into the upper half-space. Dark-Sky requirements are fulfilled
  - future proof by using standardized LED-modules (Zhaga)

Article no.	Type	Power consumption [W]*	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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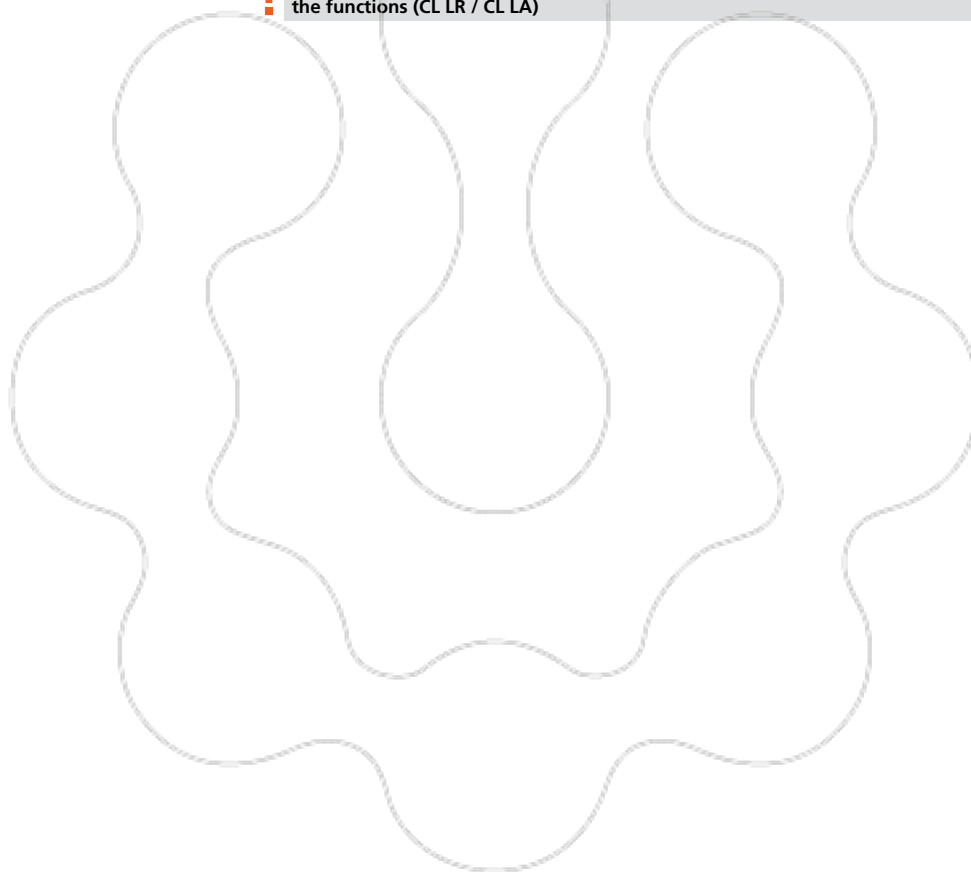
## 48... A



48001 0202	<b>48 0801A</b>	11	1.260	115	A++	7,5
48001 0203	<b>48 0802A</b>	14	1.720	123	A++	7,5
48001 0204	<b>48 0803A</b>	20	2.270	114	A++	7,5
48001 0205	<b>48 1601A</b>	19	2.420	127	A++	7,6
48001 0206	<b>48 1602A</b>	26	3.300	127	A++	7,6
48001 0207	<b>48 1603A</b>	36	4.340	121	A++	7,6
48001 0213	<b>48 2401A</b>	28	3.700	132	A++	7,6
48001 0214	<b>48 2402A</b>	39	5.020	129	A++	7,6
48001 0216	<b>48 2403A</b>	54	6.550	121	A++	7,6
48001 0208	<b>48 3201A</b>	36	4.740	132	A++	7,7
48001 0209	<b>48 3202A</b>	50	6.460	129	A++	7,7
48001 0210	<b>48 3203A</b>	70	8.400	120	A++	7,7

\* see notes

**Also available with output reduction (LR) and constant luminous flux function (CL) or combinations of the functions (CL LR / CL LA)**



## Accessories / Spare Parts

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Article no.	Type	
48002 9000	<b>48/010</b>	flat safety glass

## Modern LED Plane Surface Floodlight with Multi-Purpose Mounting System Series 47... A



**DB** standardized by Deutsche Bahn AG

### Application:

Car parks, outside facilities, loading areas, loading platforms, gateways, object protection etc.

### Design:

**Housing:** Die-cast aluminium, 2-parts, charcoal coloured metallic matt powder coated (almost DB 702). Upper section with LED-Module, optic, glass cover and electro kit, hinged and detachable. Lower section with pole mounting system, adjustment of inclination, cable retainer, cable entry with pressure compensation system. **Glass cover:** Flat safety glass, impact resistance IK09.

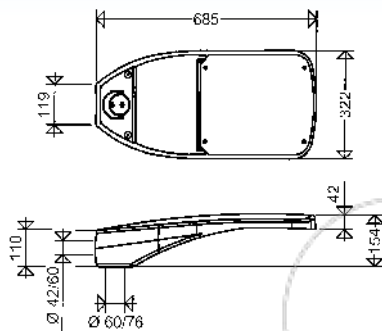
**Light distribution:** Asymmetrical beam.

**Electro kit:** Carrying all electrical components, mains connection terminal as isolating plug connection completely removable.

**Post top or cantilever mounting:** Die-cast aluminium, universal system for post top mounting Ø 60/76mm and side entry mounting Ø 42/60mm x 100mm.

**Wall mounting** with wall bracket.

**Inclination:** Post top mounting 0°, 5° and 10° (standard: 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.



Outstanding mounting advantage



### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

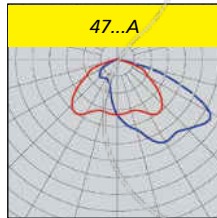
### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer.

Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)



### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- protection class I
- for connection to group or central battery systems (ZB)
- seawater resistant version
- Light Management System (LIMAS)
- screening device to the house side
- special painting in all RAL colours

### Schuch Quality – your advantage:

#### high quality, reliable at long time application

- high system life time due to use of high-quality ECGs and LED modules
- ECG with surge voltage resistance, reliable due to overload, short-circuit and over temperature protection
- optimized thermal management due to direct adaption of the LED modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- long-lasting, corrosion resistant die-cast aluminium housing with plain surface
- integrated pressure compensation system for defined „Breathing“ of the fitting

#### easy to install, to maintain and to retrofit

- removable upper part of the housing allows a comfortable, time- and cost-saving mounting in 2 steps:  
**1st step:** Mount bottom part on the pole and connect the mains  
**2nd step:** Hinge upper part, connect isolating plug and shut the housing. **READY**
- tiltable pole mounting system for post top and side entry mounting, no tools required
- adjustable inclination of the light fitting, no tools required
- removable upper part of the housing allows a comfortable maintenance, no painful overhead working. ECG can be replaced on-site
- upgrades or converts in regards to technical development by easy change of the upper-part of the housing. After the change of the LED modules the upper part of the housing can be used again.
- **uncompromisingly energy efficient and eco-friendly**
  - optimal light distribution due to highly efficient optics
  - homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
  - eco-friendly, no light emission into the upper half-space. Dark-Sky requirements are fulfilled
  - future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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## 47... A



47000 0103	<b>47 3201A</b>	36	4.910	136	A++	10,2
47000 0132	<b>47 3202A</b>	50	6.670	133	A++	10,2
47000 0104	<b>47 3203A</b>	70	8.690	124	A++	10,2
47000 0105	<b>47 4801A</b>	52	7.290	140	A++	10,2
47000 0131	<b>47 4802A</b>	74	9.910	134	A++	10,2
47000 0109	<b>47 4803A</b>	104	12.830	123	A++	10,2
47000 0107	<b>47 6401A</b>	69	9.750	141	A++	10,3
47000 0134	<b>47 6402A</b>	97	13.250	137	A++	10,3
47000 0110	<b>47 6403A</b>	137	17.080	125	A++	10,3

\* see notes

Also available with output reduction (LR) and constant luminous flux function (CL) or combinations of the functions (CL LR / CL LA)



## Accessories / Spare Parts

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Article no.	Type	
47001 9002	<b>47/010</b>	flat safety glass

## LED Plane Surface Floodlight

### Series 7700... A

#### Application:

Car Parks, industrial areas, stockyards, loading areas, illumination close to buildings, object protection and fence illumination, gateways etc.

#### Design:

**Housing:** Die-cast aluminium, 2-parts, powder coated DB702N (mica-iron paint)  
**Upper part:** With LED- and optic-modules  
**Lower part:** With electronic ballast, glass cover, cable entry with cable relief, retractable.

**Glass:** Flat safety glass pane, resistant to

temperature changes, impact resistant IK08, silicone gasket.

**Light distribution:** Narrow beam.

**Connection:** 3-pole terminal, max. clamping range 2,5 mm<sup>2</sup>.

**Cable entry:** 2 cable entries M25 x 1.5 (1 cable gland and 1 screw plug).

**Mounting:** Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting respectively for direct pole mounting in addition with pipe clamps **ROB 60/76** (see accessories).



#### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

#### Output reduction:

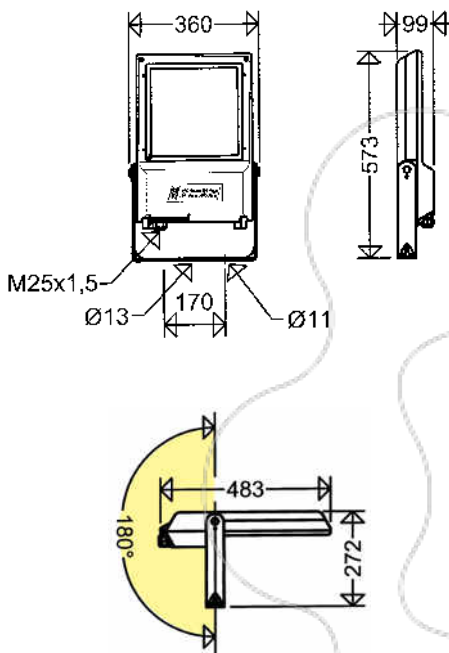
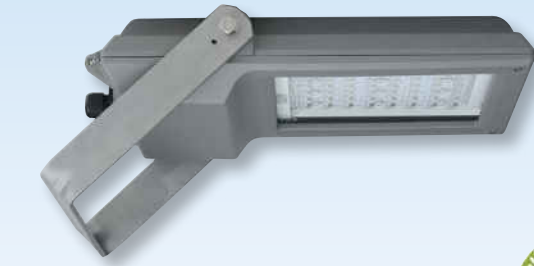
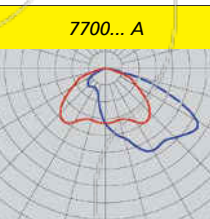
**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

#### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- asymmetrical wide beam (AB-optics)
- asymmetrical extremely wide beam (ABX)
- optics for ME-classes (AB3)
- low glare optics (ABL)
- dimmable via DALI (DIMD)
- for connection to group or central battery systems (ZB)
- special painting in all RAL colours



#### Schuch Quality – your advantage:

- high quality, reliable at long time application
  - high system life time due to use of high-quality ECGs and LED modules
  - ECG with high surge voltage resistance, reliable due to overload, short-circuit and over temperature protection
  - optimized thermal management due to direct adaption of the LED modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
  - extremely low profile housing design made from high-quality corrosion resistant die-cast aluminium with weather-resistant powder coating
- uncompromisingly energy efficient and eco-friendly
  - optimal light distribution due to highly efficient lens optics
  - homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
  - constant high luminous flux over the life of the LED due to Constant luminous flux function (option CL)
  - eco-friendly, no light emission into the upper half-space. Dark-Sky requirements are fulfilled
- comfortable maintenance due to removable lower part of the housing, large opening allows easy access to the terminal box and the electrical components, ECG replaceable on-site
- future proof by using standardized LED-modules (Zhaga)

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Constant luminous flux function (CL)	Light output reduction (LR)	Energy efficiency class	Weight [ca. kg] (without packaging)
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## 7700 ... A



77000 0001	<b>7700 1603A</b>	36		4.290	119			A++	8,7
77000 0002	<b>7700 3203A</b>	70		8.380	120			A++	9,2
77000 0003	<b>7700 4803A</b>	104		12.500	120			A++	9,6
77000 0004	<b>7700 6403A</b>	137		16.220	118			A++	9,6
77000 0017	<b>7700 1603A CL</b>	29	36	3.430	118	•		A++	8,7
77000 0018	<b>7700 3203A CL</b>	56	70	6.700	120	•		A++	9,2
77000 0019	<b>7700 4803A CL</b>	83	104	10.000	120	•		A++	9,6
77000 0020	<b>7700 6403A CL</b>	110	137	12.970	118	•		A++	9,6
77000 0021	<b>7700 1603A LR</b>	36		4.290	119		•	A++	8,7
77000 0022	<b>7700 3203A LR</b>	70		8.380	120		•	A++	9,2
77000 0023	<b>7700 4803A LR</b>	104		12.500	120		•	A++	9,6
77000 0024	<b>7700 6403A LR</b>	137		16.220	118		•	A++	9,6

\* see notes

\*\* 50% luminous flux at 45% power consumption



## Accessories / Spare Parts

Article no.	Type	
78001 9002	<b>7700/010</b>	spare safety glass
90270 0005	<b>ROB 60/76</b>	pipe clamp for direct pole mounting or on multiple post top adapters
90117 9000	<b>2537</b>	plastic cable gland M25 x 1,5 black
90118 9000	<b>2538</b>	plastic plug M25 x 1,5 black

## LED Plane Surface Floodlight

### Series 7800... A

#### Application:

Car Parks, industrial areas, stockyards, loading areas, illumination close to buildings, object protection and fence illumination, gateways etc.

#### Design:

**Housing:** Die-cast aluminium, 2-parts,

powder coated DB702N (mica-iron paint)

**Upper part:** With LED-module and optic,

**Lower part:** With electronic ballast, glass cover, cable entry with cable relief, retractable.

**Glass:** Flat safety glass pane, resistant to

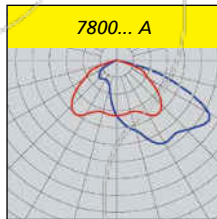
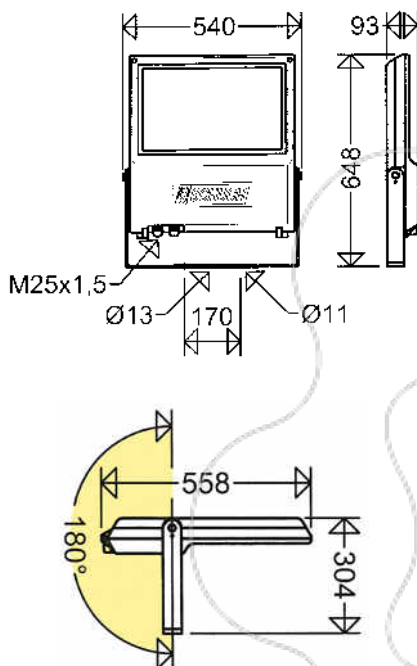
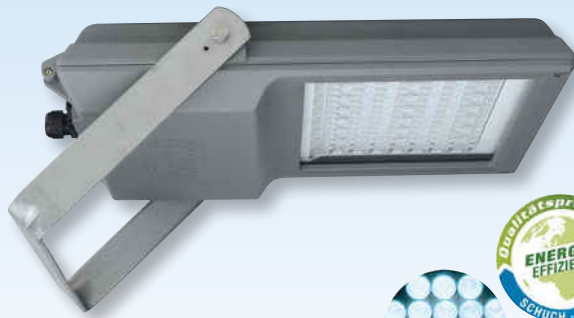
temperature changes, impact resistant IK08, silicone gasket.

**Light distribution:** Narrow beam.

**Connection:** 3-pole terminal, max. clamping range 2,5 mm<sup>2</sup>.

**Cable entry:** 2 cable entries M25 x 1.5 (1 cable gland and 1 screw plug).

**Mounting:** Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting respectively for direct pole mounting in addition with pipe clamps **ROB 60/76** (see accessories).



#### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_3 > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

#### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer.

Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

#### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- asymmetrical wide beam (AB)
- asymmetrical extremely wide beam (ABX)
- optic for M-classes (AB3)
- low glare optic (ABL)
- dimmable via DALI (DIMD)
- for connection to group or central battery systems (ZB)
- special painting in all RAL colours

#### Schuch Quality – your advantage:

- high quality, reliable at long time application
  - high system life time due to use of high-quality ECGs and LED modules
  - ECG with surge voltage resistance, reliable due to overload, short-circuit and over temperature protection
  - optimized thermal management due to direct adaption of the LED modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
  - extremely low profile housing design made from high-quality corrosion resistant die-cast aluminium with weather-resistant powder coating
- uncompromisingly energy efficient and eco-friendly
  - optimal light distribution due to highly efficient optics
  - homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
  - eco-friendly, no light emission into the upper half-space. Dark-Sky requirements are fulfilled
- comfortable maintenance due to removable lower part of the housing, large opening allows easy access to the terminal box and the electrical components, ECG replaceable on-site
- future proof by using standardized LED-modules (Zhaga)

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

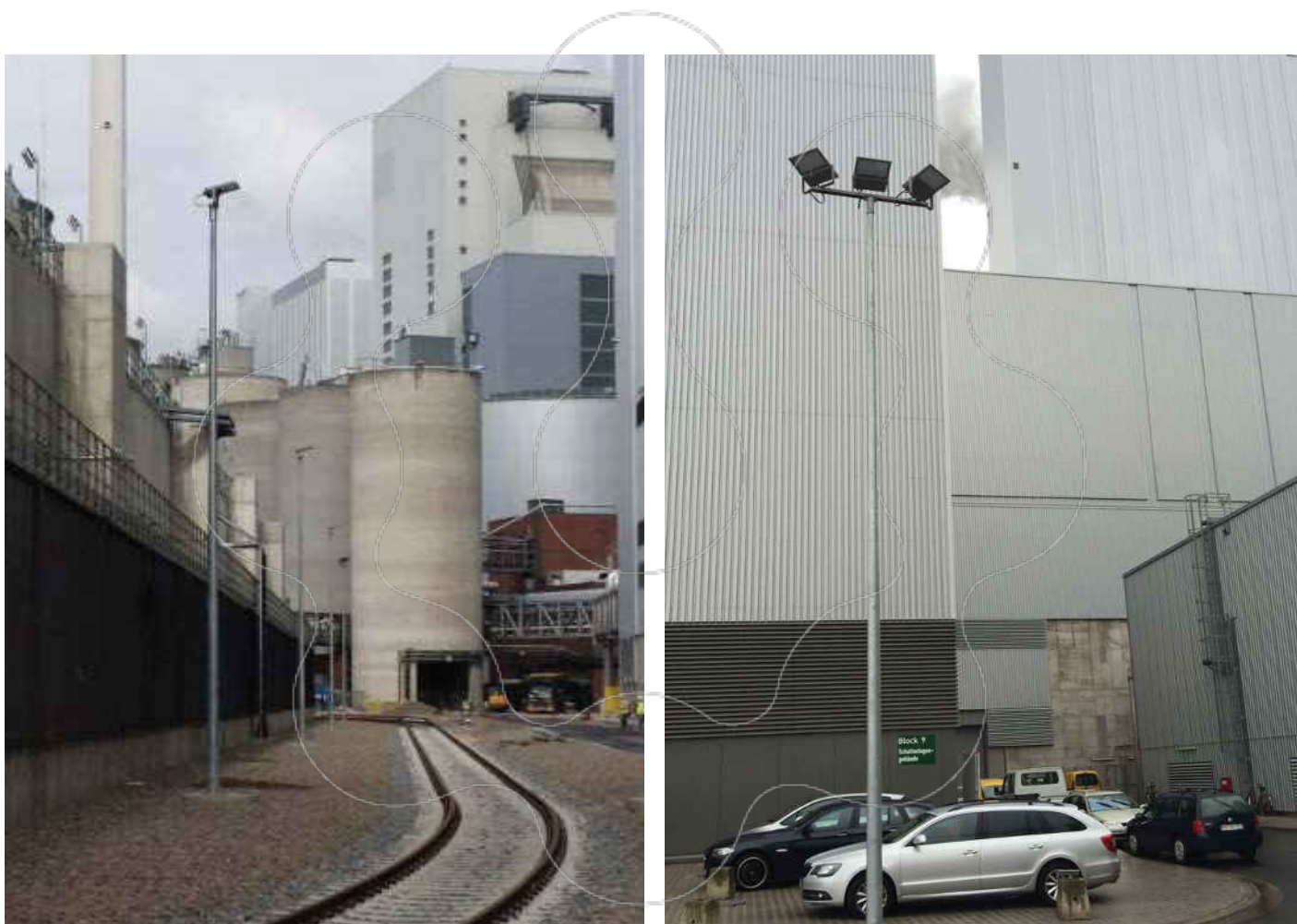
Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Constant luminous flux function (CL)	Light output reduction (LR)**	Energy efficiency class	Weight [ca. kg] (without packaging)
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## 7800 ... A



78000 0021	<b>7800 6403A</b>	1	137		16.950	124		A++	15,9
78000 0022	<b>7800 12803A</b>	2	274		32.340	118		A++	17,0
78000 0024	<b>7800 6403A CL</b>	1	110	137	13.560	123	•	A++	15,9
78000 0025	<b>7800 12803A CL</b>	2	219	274	25.870	118	•	A++	17,0
78000 0062	<b>7800 6403A LR</b>	1	137		16.950	124	•	A++	15,9
78000 0063	<b>7800 12803A LR</b>	2	274		32.340	118	•	A++	17,0

\* see notes \*\* 50% luminous flux at 45% power consumption



## Accessories / Spare Parts

Article no.	Type	
78001 9001	<b>7800/010</b>	spare safety glas
90270 0005	<b>ROB 60/76</b>	pipe clamp for direct pole mounting or on multiple post top adapters
90117 9000	<b>2537</b>	plastic cable gland M25 x 1,5 black
90118 9000	<b>2538</b>	plastic plug M25 x 1,5 black

## LED Plane Surface Floodlight Series 7571/7572/7573... A

### Application:

Car parks, outside facilities, loading areas, illumination close to buildings, fence arrangements, gateways, object protection, safety and observation illumination.

### Design:

**Housing:** Silumin sheet powder coated in light grey (RAL 7035), built-in control gear, wired ready for connection, with integrated venting system.

**Glass:** Frameless, hinged, tiltable by loosening 2 bolts, silicone gasket.

**LED-tray:** Aluminium, compact unit with

LED module and optic screwed to the glass, hinged.

**Light distribution:** Asymmetrical.

**Connection terminal:** 3-poles up to 4mm<sup>2</sup> or 4-poles version LR.

**Cable entry:** 1 gland M20

**Mounting:** Mounting bracket swivel range 180° (wall or ceiling mounting).

Pole mounting by using 7571/1 M on poles with Ø 76mm (7571/7572 ...) or by using pipe clamp ROB 60/76 (7573 ...)

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_g > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer.

Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

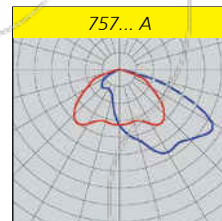
**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Optionen:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- asymmetrical extremely wide beam (ABX)
- for connection to group or central battery systems (ZB)

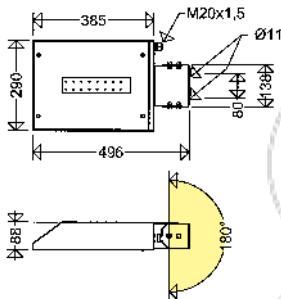
- stainless steel housing glass
- pearl blasted
- special painting in all RAL colours

STAINLESS STEEL  
corrosion resistant



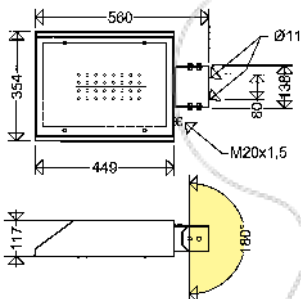
Pictures: Special paint colour DB 702N (mica-iron)

### 7571...



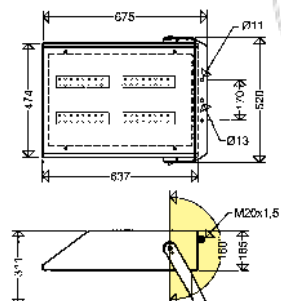
Swivel range 180°

### 7572...



Swivel range 180°

### 7573...



Swivel range 180°

### Schuch Quality – your advantage

- high system life time due to use of high-quality components
- ECG with high over-voltage protection, reliable due to overload, short circuit and overheating protection, additional temperature monitoring of the LED module
- protection against contact of the LED board due to sandwich design of glass and reflector
- quick maintenance and change of components due to an easily interchangeable gear-tray system
- optimal light distribution due to highly efficient optics with direct beam
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LED are overlapping
- eco-friendly, no light pollution in the upper space, Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

### Notes:

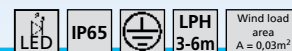
Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article No.	Type	Power consumption [W]	Power consumption/LR [W] (reduced )	Luminous flux [lm]	Light output [lm/W]	Constant luminous flux function (CL)	Light output reduction (LR)	Energy efficiency class	Weight [kg] (without packing material)
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## 7571 1603A



75711 0001	<b>7571 1603A</b>	36		4.280	119			A++	4,1
75711 0031	<b>7571 1603A CL</b>	29	36	3.420	118	•		A++	4,1
75711 0011	<b>7571 1603A LR</b>	36		4.280	119		•	A++	4,1
75711 0021	<b>7571 1603A CL LR</b>	29	36	3.420	118	•	•	A++	4,1

\*see notes \*\*45% Rated input power with 50% luminous flux

## 7572 3203A



75721 0004	<b>7572 3203A</b>	70		8.580	123			A++	5,7
75721 0034	<b>7572 3203A CL</b>	56	70	6.860	123	•		A++	5,7
75721 0014	<b>7572 3203A LR</b>	70		8.580	123		•	A++	5,7
75721 0024	<b>7572 3203A CL LR</b>	56	70	6.860	123	•	•	A++	5,7

\*see notes \*\*45% Rated input power with 50% luminous flux

## 7573 6403A



75733 0033	<b>7573 6403A</b>	137		17.090	125			A++	9,5
75733 0036	<b>7573 6403A CL</b>	110	137	13.670	124	•		A++	9,5
75733 0034	<b>7573 6403A LR</b>	137		17.090	125		•	A++	9,5
75733 0035	<b>7573 6403A CL LR</b>	110	137	13.670	124	•	•	A++	9,5

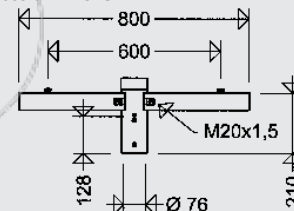
\*see notes \*\*45% Rated input power with 50% luminous flux



Post top 7571/1 M



Pole cross arm 7573 TR



## Accessories / Spare Parts

Article no.	Type	
75001 9016	<b>7511 LED</b>	spare glass pane 7571... LED
75001 9008	<b>7502 LED</b>	spare glass pane 7572... LED
75001 9009	<b>7501 LED</b>	spare glass pane 7573... LED
25610 9000	<b>2561</b>	plastic cable gland M20 x 1,5
75739 9003	<b>7571/1 M</b>	pole top with accessories for single mounting on pole Ø 76mm
75739 9004	<b>7571/2 M</b>	pole top with accessories for double mounting on pole Ø 76mm
75739 0002	<b>7573 TR</b>	pole cross arm with accessories for mounting 2 plane surface floodlights to poles of Ø 76mm
90270 0005	<b>ROB 60/76</b>	pipe clamp for direct pole mounting or on multiple post top adapters



## LED Floodlight Series 7700...

### Application:

Industrial areas, stockyards, installation areas, object protection and fence illumination, construction zone and crane lighting (with vibration absorbing suspension device), indoor application etc.

### Design:

**Housing:** Die-cast aluminium, 2-parts, powder coated DB702N (iron mica paint)

**Upper part:** With LED- and optic-modules

**Lower part:** With electronic ballast, glass cover, cable entry with cable relief, retractable.

**Glass:** Flat safety glass pane, resistant to

temperature changes, impact resistant IK08, silicone gasket.

**Light distribution:** Narrow-wide (TB) or narrow beam (T).

**Connection:** 3-pole terminal, max. clamping range 2,5 mm<sup>2</sup>.

**Cable entry:** 2 cable entries M25 x 1.5 (1 cable gland and 1 screw plug).

**Mounting:** Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting respectively for direct pole mounting in addition with pipe clamps **ROB 60/76** (see accessories).

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

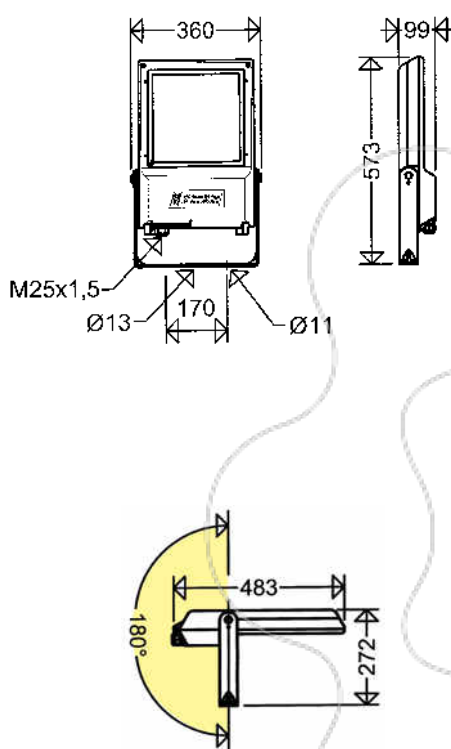
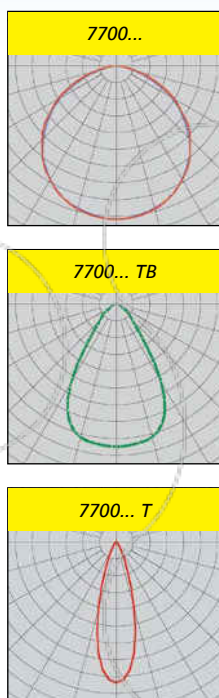
**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- light output reduction (LR) per 230V control line (standard 50%, dimmable)
- dimmable version via DALI (DIMD)
- extremely narrow beam (XT)
- for connection to group or central battery systems (ZB)
- special painting in all RAL colours



### Schuch Quality – your advantage:

- high quality, reliable at long time application
  - high system life time due to use of high-quality ECGs and LED modules
  - ECG with surge voltage resistance, reliable due to overload, short-circuit and over temperature protection
  - optimized thermal management due to direct adaption of the LED modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
  - extremely low profile housing design made from high-quality corrosion resistant die-cast aluminium with weather-resistant powder coating
- comfortable maintenance due to removable lower part of the housing, large opening allows easy access to the terminal box and the electrical components, ECG replaceable on-site
- uncompromisingly energy efficient and eco-friendly
  - optimal light distribution due to highly efficient optics
  - homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
  - eco-friendly, no light emission into the upper half-space. Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power/ consumption W *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [ca. kg] (without packaging)
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## 7700 ...



### wide beam

77000 0005	<b>7700 1603</b>	36	4.540	126	A++	8,7
77000 0006	<b>7700 3203</b>	70	8.860	127	A++	9,2
77000 0007	<b>7700 4803</b>	104	13.220	127	A++	9,6
77000 0008	<b>7700 6403</b>	137	17.150	125	A++	9,6

### narrow-wide beam

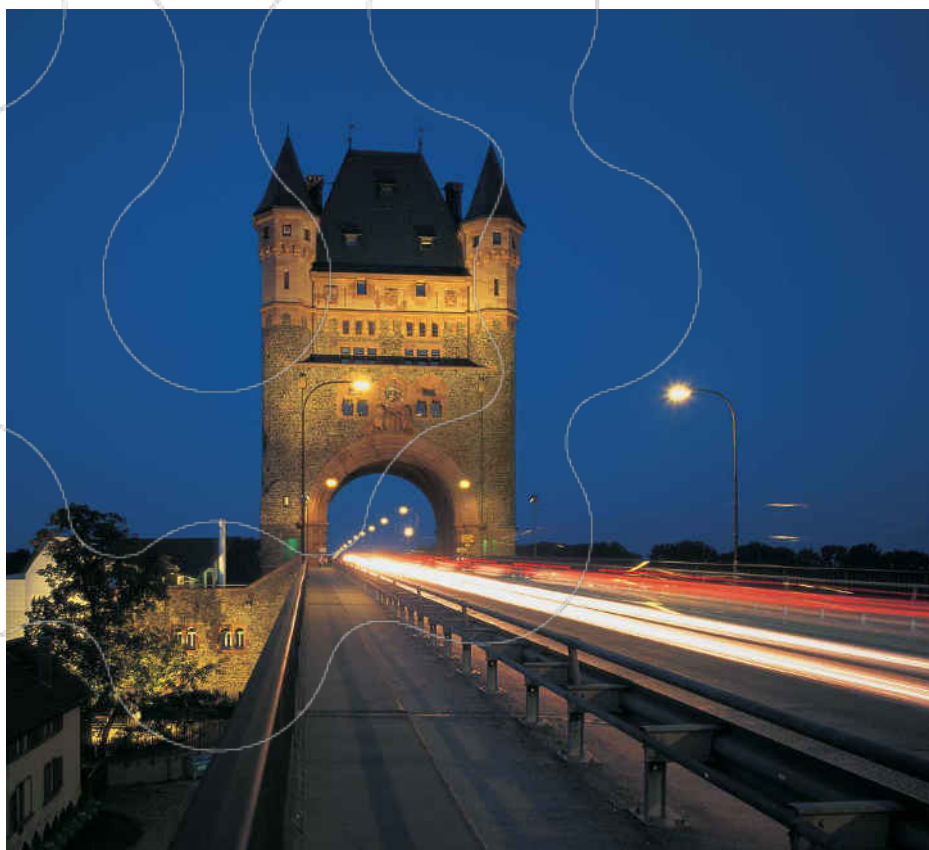
77000 0009	<b>7700 1603TB</b>	36	4.480	124	A++	8,7
77000 0010	<b>7700 3203TB</b>	70	8.760	125	A++	9,2
77000 0011	<b>7700 4803TB</b>	104	13.070	126	A++	9,6
77000 0012	<b>7700 6403TB</b>	137	16.950	124	A++	9,6

### narrow beam

77000 0013	<b>7700 1603T</b>	36	4.670	130	A++	8,7
77000 0014	<b>7700 3203T</b>	70	9.140	131	A++	9,2
77000 0015	<b>7700 4803T</b>	104	13.630	131	A++	9,6
77000 0016	<b>7700 6403T</b>	137	17.680	129	A++	9,6

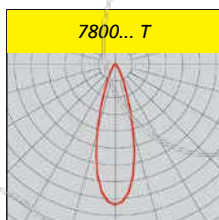
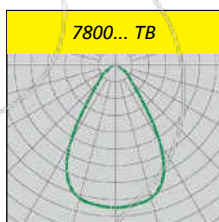
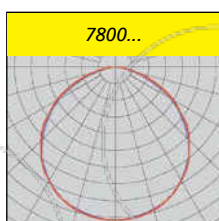
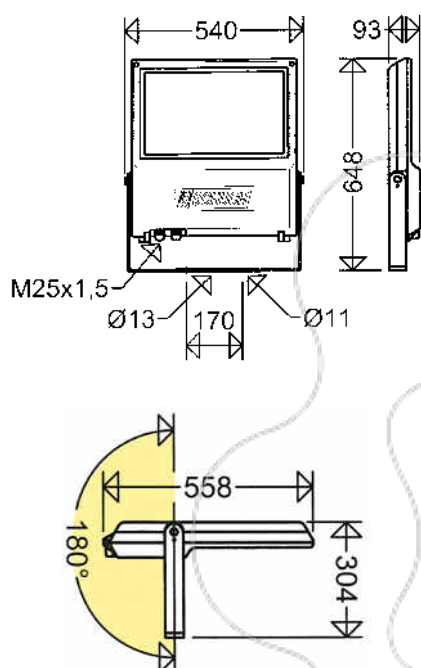
\* see notes

Also available with output reduction (LR) and constant luminous flux function (CL) or combinations of the functions (CL LR / CL LA)



## Accessories / Spare Parts

Article no.	Type	
78001 9002	<b>7700/010</b>	spare safety glas
90270 0005	<b>ROB 60/76</b>	pipe clamp for direct pole mounting or on multiple post top adapters
90117 9000	<b>2537</b>	plastic cable gland M25 x 1,5 black
90118 9000	<b>2538</b>	plastic plug M25 x 1,5 black



## Plane Surface Floodlight Series 7800...

### Application:

Industrial areas, stockyards, installation areas, object protection and fence illumination, construction zone and crane lighting (with vibration absorbing suspension device), indoor application with high ceilings etc.

### Design:

**Housing:** Die-cast aluminium, 2-parts, powder coated DB702N (iron mica paint)

**Upper part:** With LED- and optic-modules

**Lower part:** With electronic ballast, glass cover, cable entry with cable relief, retractable.

**Glass:** Flat safety glass pane, resistant to

temperature changes, impact resistant IK08, silicone gasket.

**Light distribution:** Narrow-wide (TB) or narrow beam (T).

**Connection:** 3-pole terminal, max. clamping range 2,5 mm².

**Cable entry:** 2 cable entries M25 x 1.5 (1 cable gland and 1 screw plug).

**Mounting:** Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting respectively for direct pole mounting in addition with pipe clamps **ROB 60/76** (see accessories).

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{80}$  100,000h

**ECG:** 220-240V, 50-60Hz, lifetime 100,000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection. With DALI-interface. ECG configurable for power reduction (LR / LA), constant luminous flux function (CL) and flexible luminous flux setting. (Desired configuration to be mentioned at the time of ordering.) Also, combinations of the functions are possible (CL LR / CL LA).

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Output reduction:

**With control phase (LR):** For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with a second dimming step.

**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

### Options:

- 3,000K (light colour 730)
- 1,800K (light colour „Amber“)
- light output reduction (LR) per 230V control line (standard 50%, dimmable)
- dimmable version via DALI (DIMD) or 1-10V interface (DIMA)

- uniform luminous flux option (CL) to keep the light output on same level for the whole lifetime (L100)
- for connection to group or central battery systems (ZB)
- special painting in all RAL colours

### Schuch Quality – your advantage:

- high quality, reliable at long time application
  - high system life time due to use of high-quality ECGs and LED modules
- ECG with surge voltage resistance, reliable due to overload, short-circuit and over temperature protection
- optimized thermal management due to direct adaption of the LED modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- extremely low profile housing design made from high-quality corrosion resistant die-cast aluminium with weather-resistant powder coating
- uncompromisingly energy efficient and eco-friendly
  - optimal light distribution due to highly efficient optics
  - homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
  - eco-friendly, no light emission into the upper half-space. Dark-Sky requirements are fulfilled
- comfortable maintenance due to removable lower part of the housing, large opening allows easy access to the terminal box and the electrical components, ECG replaceable on-site
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power / consumption W *	Luminous flux [lm] **	Luminous efficacy [lm/W]	Energy efficiency class	Weight [ca. kg] (without packaging)
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## 7800 ...



### wide beam

78000 0011	<b>7800 6403</b>	137	18.160	133	A++	15,9
78000 0012	<b>7800 12803</b>	274	34.640	126	A++	17,0

### narrow-wide beam

78000 0001	<b>7800 6403TB</b>	137	17.520	128	A++	15,9
78000 0002	<b>7800 12803TB</b>	274	33.760	123	A++	17,0

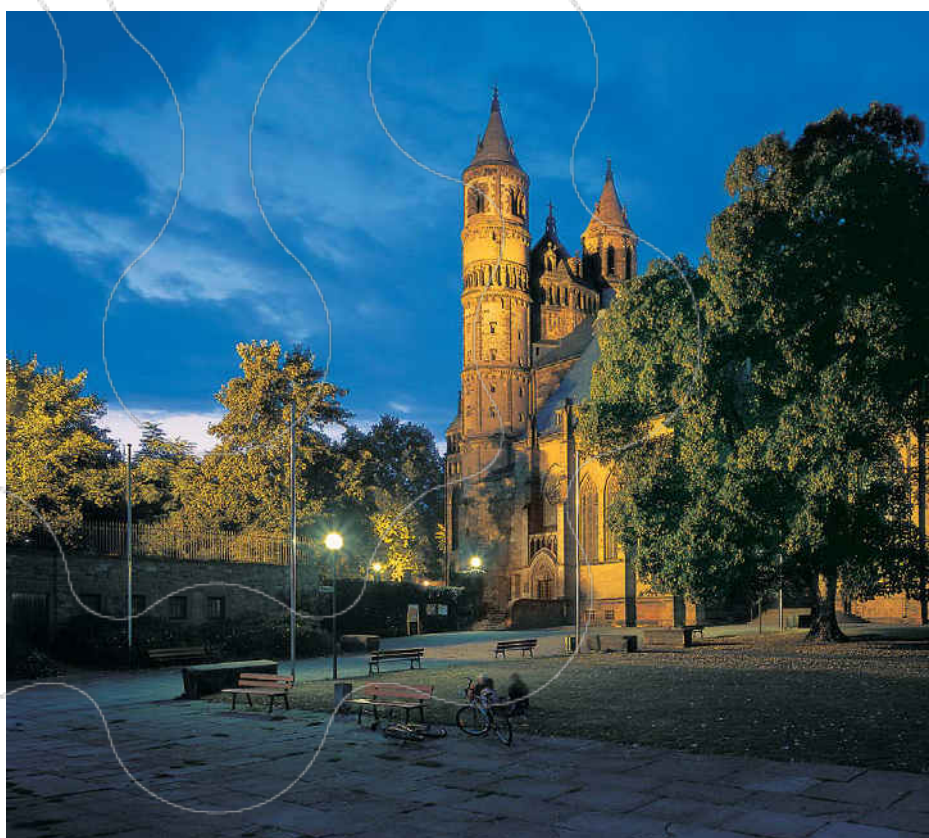
**NEW**

### narrow beam

78000 0041	<b>7800 6403T</b>	137	17.740	129	A++	15,9
78000 0042	<b>7800 12803T</b>	274	34.840	127	A++	17,0

\* see notes

Also available with output reduction (LR) and constant luminous flux function (CL) or combinations of the functions (CL LR / CL LA)



## Accessories / Spare Parts

Article no.	Type	
78001 9001	<b>7800/010</b>	spare safety glas
90270 0005	<b>ROB 60/76</b>	pipe clamp for direct pole mounting or on multiple post top adapters
90117 9000	<b>2537</b>	plastic cable gland M25 x 1,5 black
90118 9000	<b>2538</b>	plastic plug M25 x 1,5 black

## LED Floodlight

### Series 7900...

#### Application:

Industrial areas, large equipment for open-cast mining, installation sites, stockyards, crane systems, on- and off-shore areas. Illumination of buildings, for indoor installation with high ceilings .e.g. industrial halls, waste bunkers etc.

#### Design:

**Housing:** Copper-free cast aluminium.

**ECG** located inside the housing.

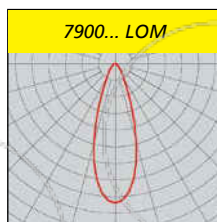
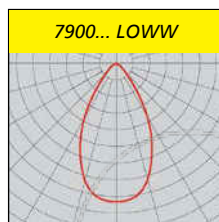
**Flat safety glass:** Resistant to temperature variations, frameless, impact resistance

IK08, silicone gasket.

**Light distribution:** Narrow (LOM) or narrow/wide (LOWW) beam.

**Connection:** Terminal compartment accessible from outside with 2 entries, 1 gland and 1 blind plug made from plastic M25 x 1.5mm<sup>2</sup>.

**Mounting:** Bracket, infinitely swivelling around the longitudinal axis of the floodlight (tilt angle adjustment).



#### Technical Data:

**LED:** Highpower-LED, typically 5,000K, colour rendering CRI > 70, lifetime (L80 100,000h

**ECG:** 220-240V AC, 50/60Hz. Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited. Surge voltage resistance 4kV, excess temperature protection, overload and short circuit protection.

Ambient temperature: -20°C up to see article tables (-50°C - versions on demand).

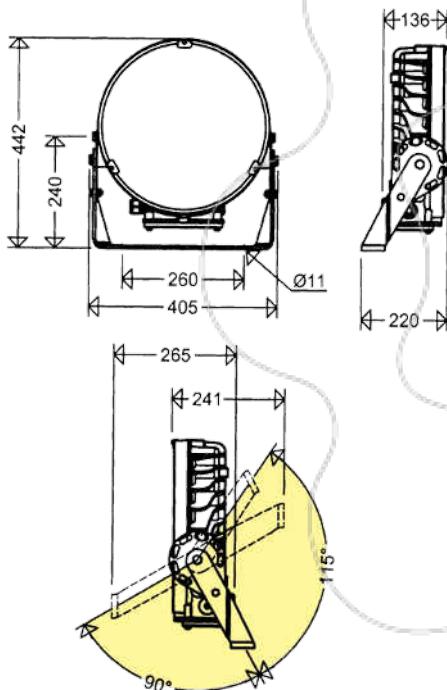
#### Options:

– 2nd cable gland for cable looping  
– „D“-sign for locations with increased fire risk

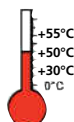
– for connection to group or central battery systems (ZB)

#### Schuch Quality - your advantage:

- high system life time due to use of high-quality ECGs and LED
- extremely low luminous flux decline during lifetime L<sub>80</sub> 100,000h
- ECG with high over voltage protection, reliable due to overload -, short-circuit - and temperature excess protection
- excellent thermal management possible by direct adaption of the LED to the die-cast aluminium housing, large cooling surface, excellent thermal conductivity
- sturdy housing made from copper free aluminium alloy
- infinitely adjustable tilt angle
- calculated lens optics assure a homogeneous and effective light distribution, illumination due to the Multi-Layer technology
- applicable in a wide temperature range from -20°C up to +55°C, depending on version (on demand from -50°C up to +55°C max.)
- instant light with maximum luminous flux even at very low temperatures (increased luminous flux)



Swivel range: ± 205



#### 7900 ...



Article no.	Type	Power consumption W *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Tmax [°C]	Energy efficiency class	Weight [ca. kg] (without packaging)
<b>narrow beam</b>							
79000 0001	7900 4201LOM	48	4.710	98	55	A++	11,8
79000 0002	7900 4203LOM	90	8.260	92	40	A+	11,8
<b>narrow wide beam</b>							
79000 0004	7900 4201LOWW	48	4.650	97	55	A++	11,8
79000 0005	7900 4203LOWW	90	8.150	91	40	A+	11,8

\* see notes

#### Accessories / Spare Parts

Article no.	Type	
79001 9001	7901	spare safety glas
75350 0031	SD 7900	vibration absorbing suspension device

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



## Cast Aluminium Multi-Purpose Pole Arm Carrier Series 4860 – 4864

**Application:** Series 43, 44, 46, 47, 53, 287

### **Application:**

For mounting outdoor light fittings on flat walls and corners of buildings.

### **Design:**

Aluminium casting: Natural finish, with four fixing holes  $\varnothing 10,5\text{mm}$ , and carrier shaft for galvanized steel pole arms.

Pole arm:  $\varnothing 42\text{mm}$  (100, 250, or 400mm long), or  $\varnothing 60\text{mm}$  (100 or 250mm long), with 2 fixing screws M8

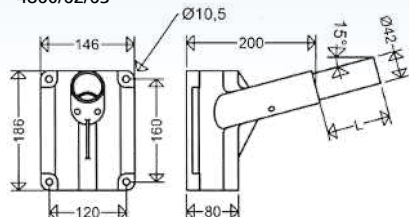
### **Pole arm assembly:**

The  $\varnothing 42\text{mm}$  pole arm is pushed into the carrier shaft, the  $\varnothing 60\text{mm}$  pole arm is slipped over the carrier shaft. The pole arm is secured with 2 screws M8 (included in supply).

### **Options:**

Special painting in RAL or DB colours

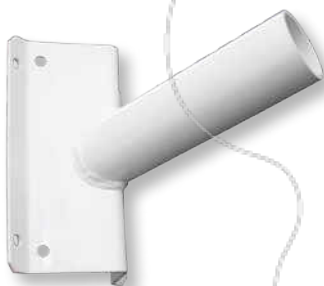
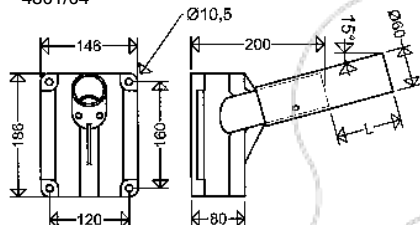
4860/62/63



## 4860 - 4864

Article no.	Type	D	L	Weight ca. [kg]
48600 0001	4860	42	100	1,4
48600 0002	4861	60	100	1,7
48600 0003	4862	42	250	1,9
48600 0004	4863	42	400	2,3
48600 0005	4864	60	250	2,5

4861/64



## Welded Aluminium Standard Pole Arm Carrier Series 4870 / 4871

**Application:** Series 43, 44, 46, 47, 53

### **Application:**

For mounting outdoor light fittings on flat walls and corners of buildings.

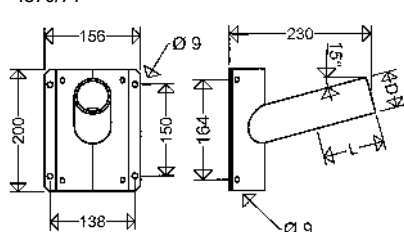
### **Design:**

Aluminium plate 4 mm thick, powder coated (RAL 7035), with eight fixing holes  $\varnothing 9\text{mm}$  and pole arm  $\varnothing 42\text{mm}$  (100mm long) or  $\varnothing 60\text{mm}$  (100mm long).

### **Options:**

Special painting in RAL or DB colours

4870/71



## 4870 / 4871

Article no.	Type	D	L	Weight ca. [kg]
48700 0001	4870	42	100	0,6
48700 0002	4871	60	100	0,7

## Pole-Top Brackets, Reducing Adapters, Tubular and Wall Brackets

All pole-top and wall brackets with the exception of the aluminium tubular brackets are made from stainless steel, glass pearl treated. Powder coating in any RAL colour is possible at extra charge.

Article No.	Type	Description	Weight ca. [kg]	for following light fittings:
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### Pole-top brackets Ø 42mm

60099 0001	<b>600/1</b>	for 1 fitting	3,2	43, 53, 44, 46, 47, 48, 287 (20W)
60099 0002	<b>600/2</b>	for 2 fittings	4,0	
60099 0003	<b>600/3</b>	for 3 fittings	4,8	
60099 0004	<b>600/4</b>	for 4 fittings	5,6	

### Pole-top brackets Ø 60mm

61099 0001	<b>601/1</b>	for 1 fitting	3,7	44, 46, 47, 48 and 7573 with ROB 60/76
61099 0002	<b>601/2</b>	for 2 fittings	5,1	
61099 0003	<b>601/3</b>	for 3 fittings	6,5	
61099 0004	<b>601/4</b>	for 4 fittings	7,9	

### Pole-top brackets Ø 60mm

61099 0001	<b>610/1</b>	for 1 fitting	3,7	44 A, and 7573 with ROB 60/76
61099 0002	<b>610/2</b>	for 2 fittings	5,1	
61099 0003	<b>610/3</b>	for 3 fittings	6,5	
61099 0004	<b>610/4</b>	for 4 fittings	7,9	

### Reducers

60399 0001	<b>603 (60/42)</b>	1	2,4	43, 53, 44 287 (20W) 43, 44, 46, 47, 48 43, 53
60499 0001	<b>604 (60/42)</b>	2	4,0	
60599 0001	<b>605 (60/42)</b>	3	3,5	
60699 0001	<b>606 (48/42)</b>	4	2,8	
60799 0001	<b>607 (60/42)</b>	5	1,6	

### Round arch pole-top adapter

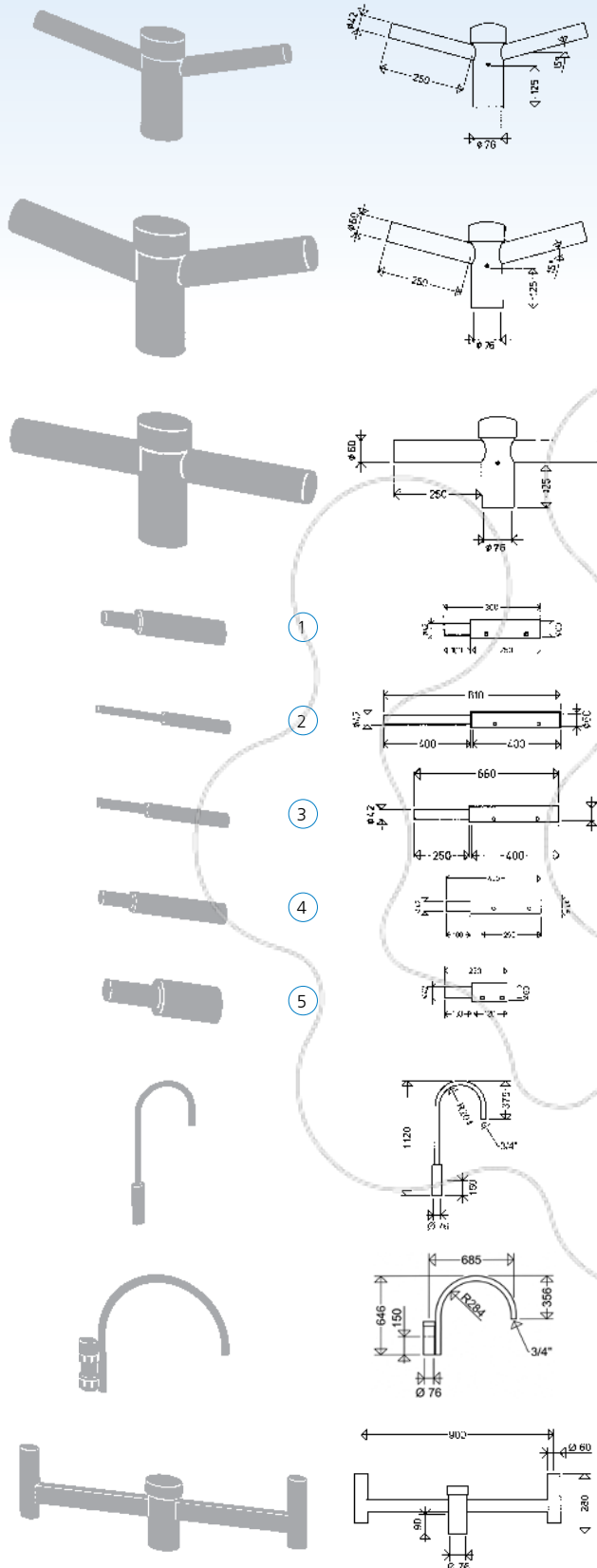
61999 0001	<b>619/1</b>		8,8	564, 565
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### Pole-top

62299 0001	<b>622/1</b>	for 1 fitting	7,2	564, 565
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### Pole-top

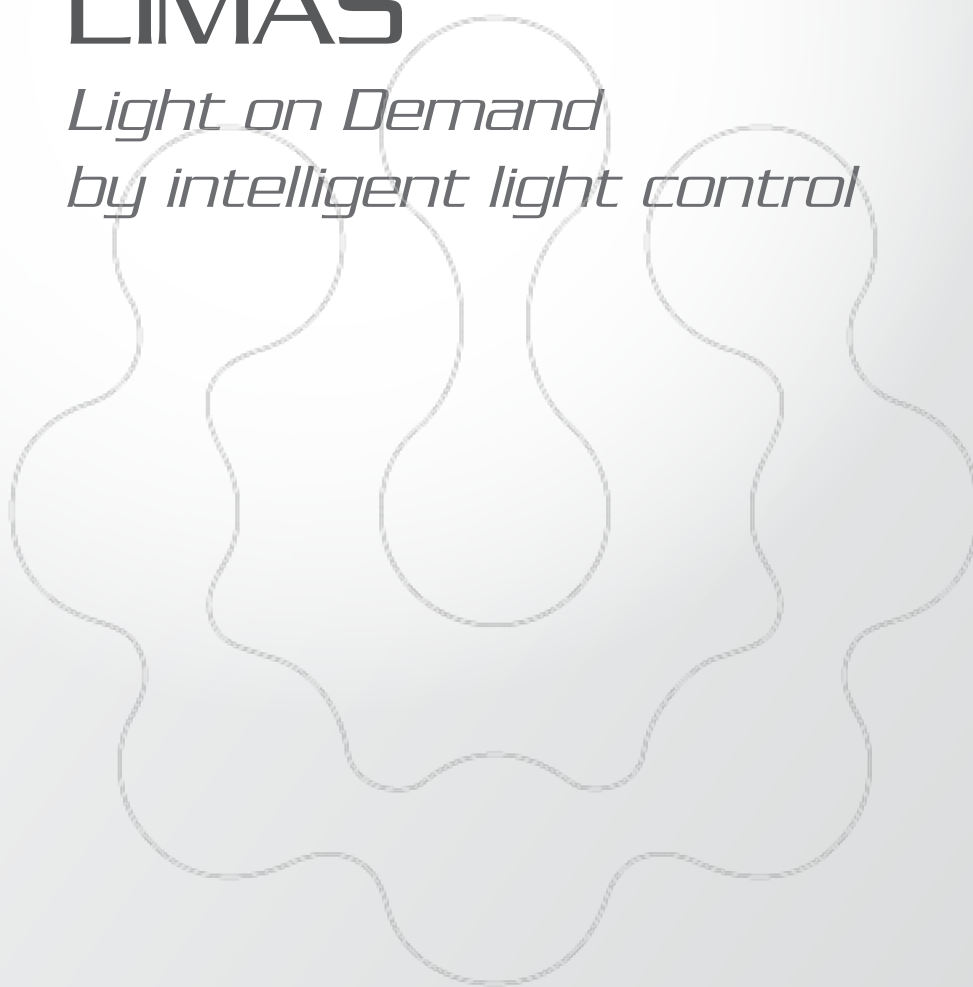
62599 0001	<b>625/1</b>	for 1 fitting	4,6	541, 542, 543, 553, 544, (with RZ 1), 43, 53, 44, 46, 47, 48
62599 0002	<b>625/2</b>	for 2 fittings	7,0	





# LIMAS

*Light on Demand  
by intelligent light control*





## LIMAS - Light Management System

### Light on demand

Light only where it is needed and only as long as it is required – all while optimally exploiting the efficiency potential of LED technology and making maximum savings on energy costs.

With the LIMAS light management system from SCHUCH, you can create a needs-oriented, intelligent lighting control system both for streets, squares and cycle paths and for industrial buildings.

Intelligent components built into the light fittings automatically generate a wireless network to communicate with each other. As desired, or when motion is detected,

they can either turn up a dimmed lighting level or return it to a pre-set background level. What is more, programmed operating modes can be altered at any time, and lighting operating data read through encrypted remote access at a PC or via a tablet and USB dongle on site.

So your lighting network can be efficiently monitored, controlled, measured and operated at all times.

### When does it make sense to use LIMAS?

1. General energy cost savings using light on demand.
2. With changing usage profiles, e.g. to accommodate temporary city-centre events (public events like markets, festivals etc.), when you want the lighting level to only drop later or not at all.
3. With different requirement profiles in different city areas (e. g. residential areas, industrial zones, the old town area, and conflict zones or social flashpoints).

### Benefits

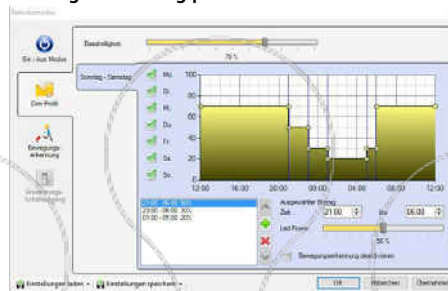
- (G)+(D) - optimised energy saving through light on demand
- (G)+(D) - easy cost control through energy consumption metering
- (G) - evaluation and export of selected/stored lighting data from the data base
- (G) - proactive, targeted maintenance and failure elimination through the light fittings' automatic failure reporting and location display
- (G)+(D) - user-friendly interface with graphic display of the light fittings' operating status, energy consumption, function and location
- (G)+(D) - flexibility thanks to straightforward wireless modification of dimming profiles, together with easy integration of new light fittings into the system with a self-organising mesh network
- (G)+(D) - security thanks to system-wide encryption with PIN code protection
- (G)+(D) - central control and (with (G) automatic) monitoring of every single light point
- (G)+(D) - no additional wiring required

(G) = Solution with gateway and server (D) = Solution with USB dongle

## System functions

1. Freely configurable dimming profiles based on time of day, duration and dimming level
2. Real-time access to the light fittings for Instant On or to alter dimming profiles as required
3. Integrated constant luminous flux function to keep the luminous flux constant over the LEDs' entire useful life
4. Component temperature monitoring (overheating protection)
5. Energy consumption metering
6. Optional: motion detection with a motion sensor (light on demand)
7. Optional: optimised On/Off with brightness sensor
8. Optional: time, date, parameter and position monitoring via GPS receiver and GPS-enabled control unit, together with automatic error messages with location information

### Setting of dimming profiles



### Energy consumption indicator



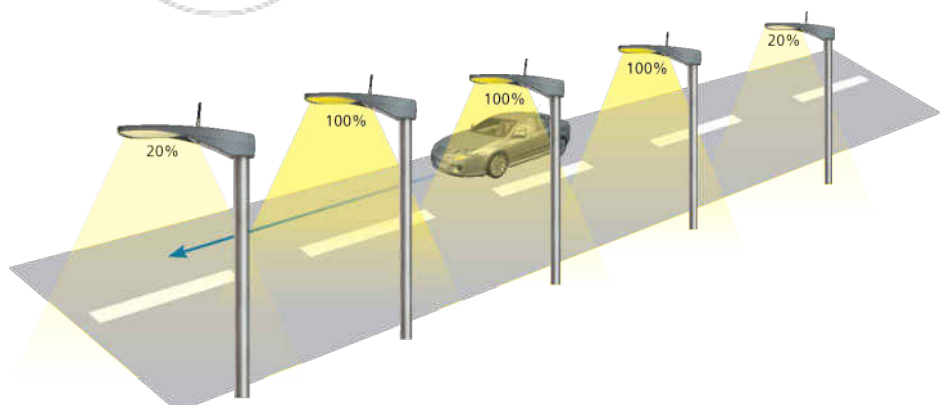
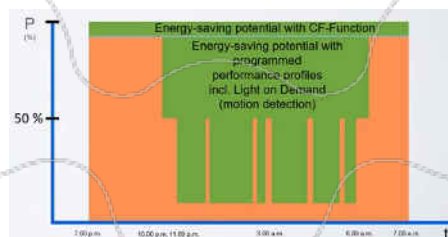
### Location indicator



### „Light on Demand“

When a road user passes along the street, this is recognised by the motion sensors integrated in the light fittings, and the dimmed lights automatically adjust up to the programmed lighting level. The signal is transmitted wirelessly from light fitting to light fitting, and all the fittings increase

their lighting level. The result is that the light accompanies the road user dynamically. After the programmed hold period the light fittings automatically return to the pre-set dimming level.



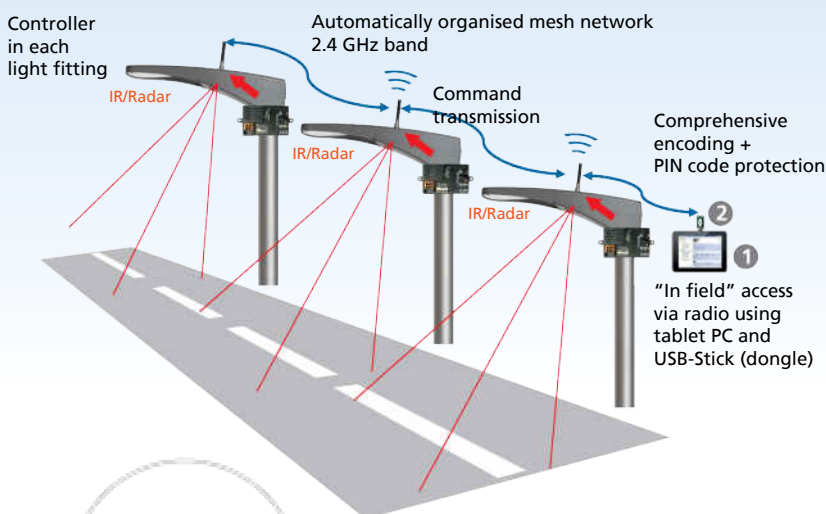


## System versions

### With USB dongle and software

The light fittings can also be operated independently without a server. Programming, and any subsequent adjustments, are done on site using a tablet PC 1 and USB dongle 2.

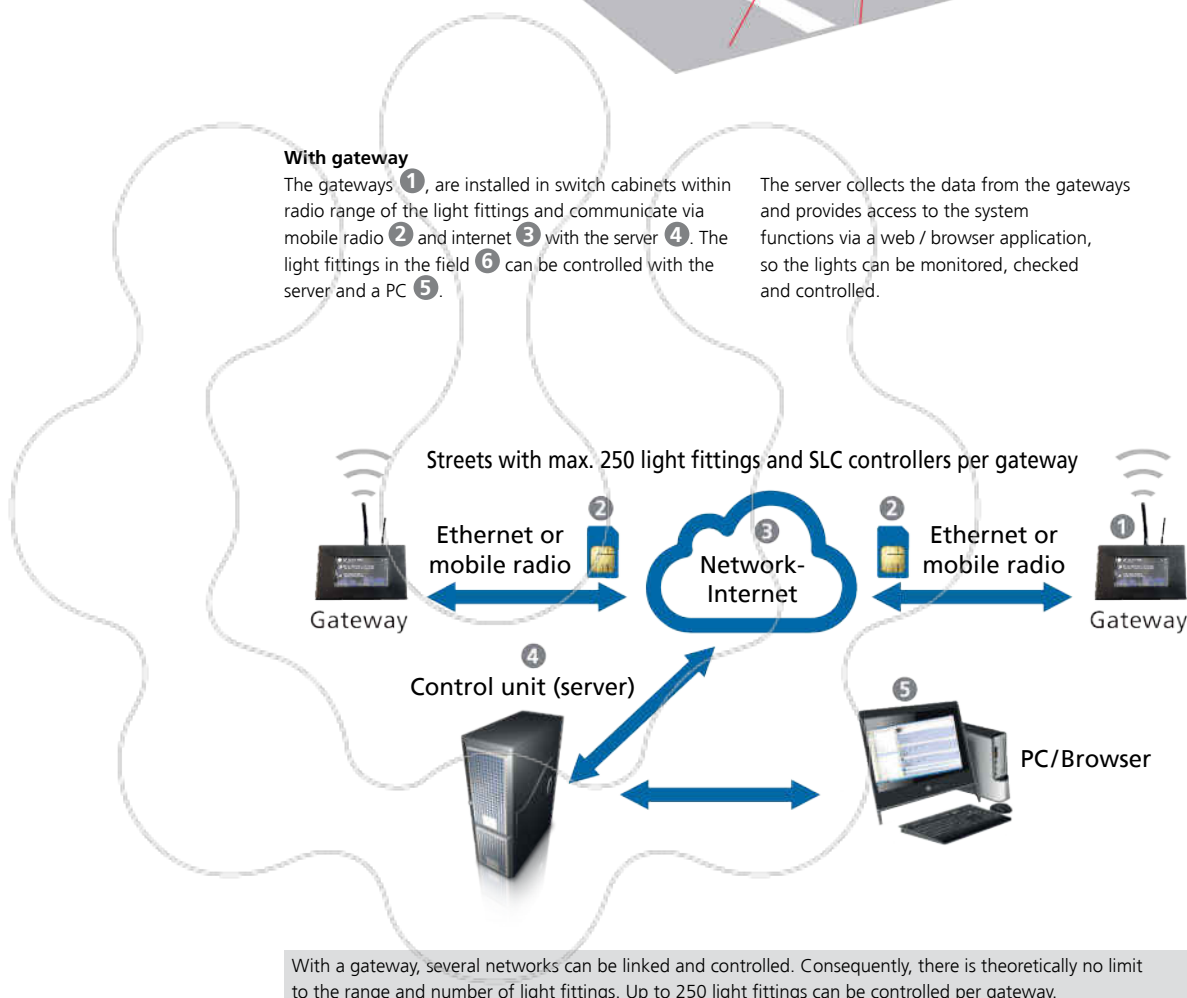
Up to 250 light fittings can be controlled by each USB dongle.



### With gateway

The gateways 1, are installed in switch cabinets within radio range of the light fittings and communicate via mobile radio 2 and internet 3 with the server 4. The light fittings in the field 6 can be controlled with the server and a PC 5.

The server collects the data from the gateways and provides access to the system functions via a web / browser application, so the lights can be monitored, checked and controlled.



With a gateway, several networks can be linked and controlled. Consequently, there is theoretically no limit to the range and number of light fittings. Up to 250 light fittings can be controlled per gateway.

## LED-Outdoor Light Fittings with Light Management System

**Street light fittings** 47, 48, 541, Cupina, Planeo

**Rope supported light fittings** 49, 59

**Plane Surface floodlights** 47A, 48A, 7800A

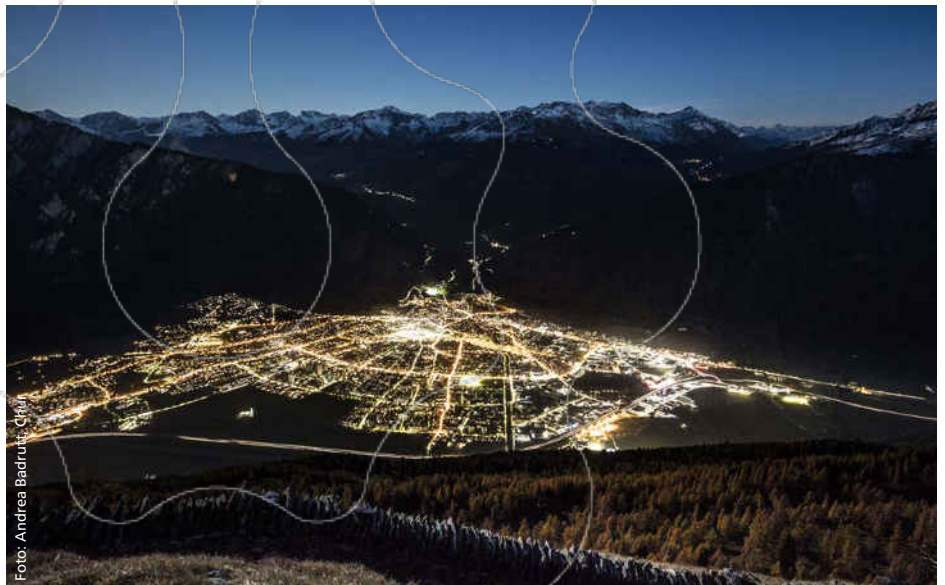
### Further series on demand.


#### Design:

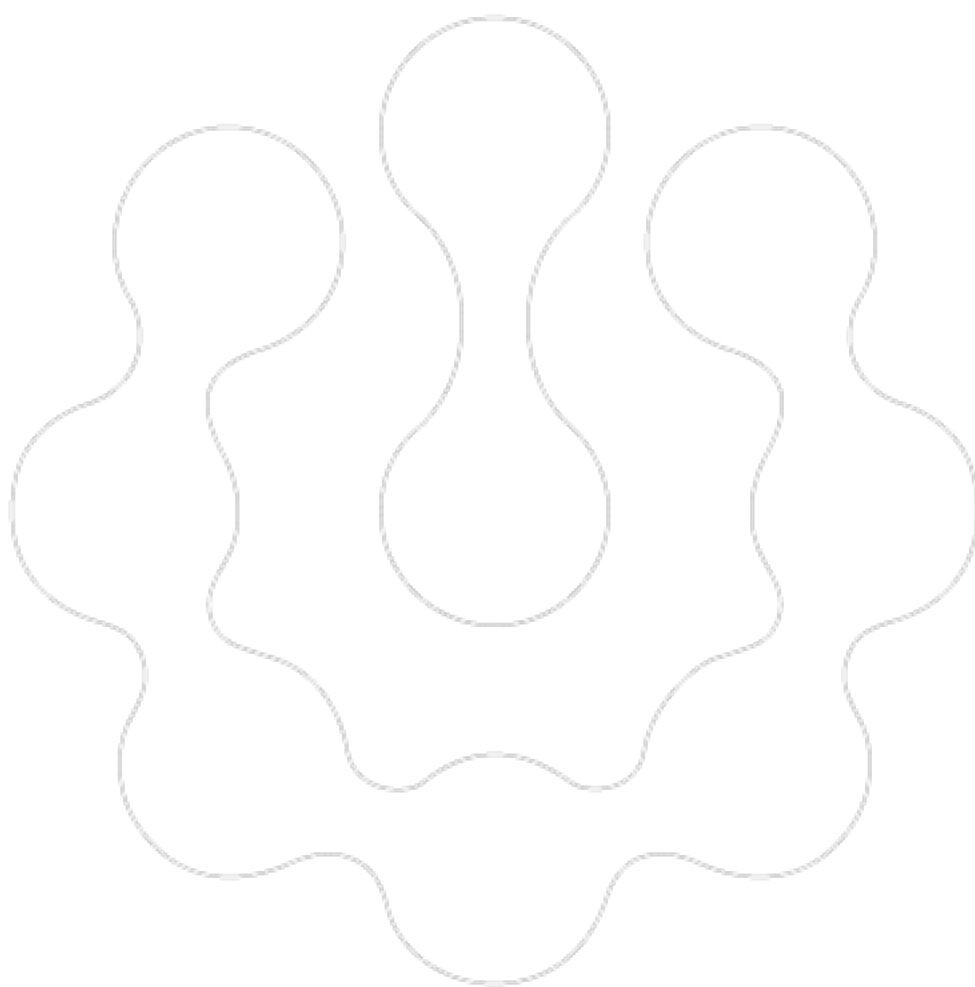
- IR with infrared sensor for demand-based lighting - „Light on Demand“
- LMG with GPS antenna used for precisely timed dimming in connection with autonomous operation without gateway
- LMP with photocell / twilight switch (external)
- USB-Dongle + Software for subsequent adjustments of factory programmed settings and for controlling the light fittings in the field, including an energy consumption indicator
- Gateway for monitoring and controlling the light fittings from a distance with SIM card and mobile network incl. data logger function

#### Options:

- factory programming of performance profiles according to customer requirements (timed dimming)
  - > if the installation does not include a gateway, at least one light fitting must be of type LMG.
- factory programming of a constant light function (CF) according to customer requirements
  - 3,000K (light colour 730)
  - special painting in RAL colours



Since 2015 more than 2.500 SCHUCH light fittings of series 47 and 48... with light management  have been installed in Chur (town in Switzerland), browser based with gateways, spread all over the town.





# Emergency Light Fittings

## Reliability in severe environment

Darkness means fear. Especially in buildings with a lot of people inside, panic will come up if the light fails.

For this reason and according to the relevant laws and standards, an emergency lighting system must be installed.

Due to special operating conditions, emergency light fitting design shall comply with particular requirements.

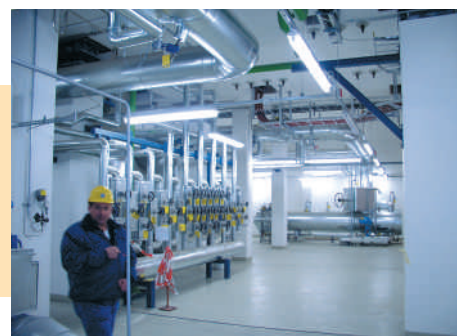
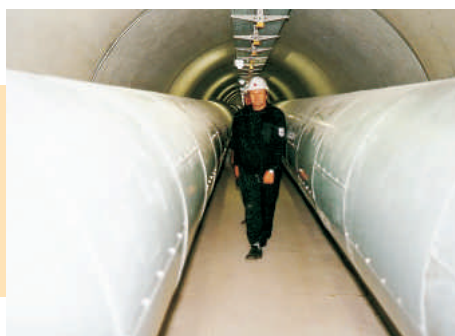
### A BROAD PRODUCT SPECTRUM, INCLUDING SPECIAL SOLUTIONS.

SCHUCH offers optimal solutions for each specific application of an emergency lighting system, e.g. highly dangerous work places and escape routes.

A wide range of products is available: From light fittings with built-in batteries to group and central battery systems connected ones.

An emergency version is available for almost each light fitting out of the wide range of SCHUCH products.

Applications with harsh conditions, such as high ambient temperatures or extreme variations in temperature, consistently challenge us to develop new custom-built solutions. Ambient temperatures of +50°C are often observed at power plants, waste incineration plants, recycling plants, chemical factories, as well as commercial kitchens, bakeries, etc. In such cases, SCHUCH light fittings can also help safely illuminate and indicate any escape route.



### LED-TECHNOLOGY

LED light fittings are meanwhile a standard solution with regard to indication and illumination of escape routes. Pictogram illumination that complies with the standards can be done with a minimum supply power.

By applying relevant optics, escape route light fittings may be installed at longer distances between the light points. This allows reducing cost without compromising safety.

SCHUCH is a qualified partner having over 10 years of experience in emergency LED light fitting production.

#### 2005

Introduction of first emergency light fittings with the new LED technology.

#### 2011

Introduction of first explosion-protected LED light fittings equipped with a battery.

#### 2013

New emergency LED light fitting Series 161... can replace standard fluorescent tube versions up to 2 x 58 W.

#### 2015

The product range is extended by adding emergency LED light fittings with batteries to be operated at an ambient temperature up to +50 °C and with wide temperature ranges of -40 °C to +50 °C.

#### 2016/17

Generation 2 of series 163 with a remarkable efficiency increase.

Product	Series	Page
<b>Light Fittings with diffuser</b>		
<b>Series 161/162...</b>	<b>161/162.. MA</b>	<b>144-146</b>
• for high ambient temperatures up to +50°C	... H50 MA	145
• for wide temperature ranges from -40°C up to +45/50°C	... H/T MA	146
<b>Series 163... Generation 2</b>	<b>163 G2.. MA</b>	<b>147</b>
<b>Series 164 KL...</b>	<b>164 KL... MA</b>	<b>148-149</b>
<i>small polyester light fittings</i>		
<i>for central battery systems</i>	<b>164 KL... ZB</b>	149
<b>Series 131...</b>	<b>131... MA</b>	<b>150-151</b>
<i>small PC-light fittings</i>		
<i>for central battery systems</i>	<b>131... ZB</b>	151
<b>Series 3611...</b>	<b>3611... MA</b>	<b>152-153</b>
<i>small die-cast aluminium light fittings</i>		
<i>for central battery systems</i>	<b>3611... ZB</b>	153

### Group or central battery systems

We recommend the use of systems of the make of INOTEC. Other makes upon request

#### Note

Emergency light fittings for zone 1/2 or 21/22 areas you may find in chapter „SCHUCH Explosion-Protected LED Light Fittings“

Emergency light fittings for other applications on demand.



Foto: BASF



## Dustproof/Waterproof LED Emergency Light Fitting with Diffuser Series 161 .. MA

### Application:

At workplaces and for illuminating and identifying escape routes etc.

### Mechanical Design:

**Housing:** Glass fibre reinforced polyester resin, silicone gasket.

**Diffuser:** Injected, acrylic glass, frosted, additional clear cover over the LED-modules to ensure protection against contact.

**Closure:** Three-part captive plastic clips (KK), incl. 2 safety clips (KKS)

**Reflector:** Aluminium, painted can be suspended or removed and carries the electrical components.

**Connection:** 4-pole terminal.

**Cable entries:** 2 plugs M20.

**Mounting:** Closed knock-outs for direct ceiling mounting (to be opened at site). Sealing and pressure disks inside each fitting.

### Technical Data:

**LED:** Line modules 4.000K,  $R_a > 80$ , life of operation  $L_{80} > 50.000h$  at max. ambient temperature

**Incorporated NiCd battery,** electronic charger, short circuit protected battery and reverse battery protection

**Electronic deep discharge protection:** acc. to EN 61347-2-7

**Re-charging time:** 24h, acc. to EN 60598-2-22

**Automatic monitoring:** of the emergency light fitting according to EN 62034, indication of the test results by 2-coloured LED (luminescence diode) at the luminaire

### Mode of operation:

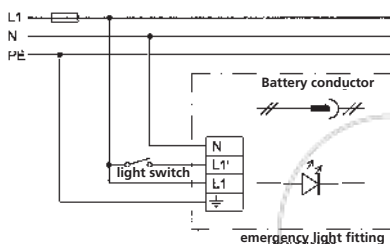
**maintained operation** = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

**Connection voltage:** 220-240V 50/60Hz

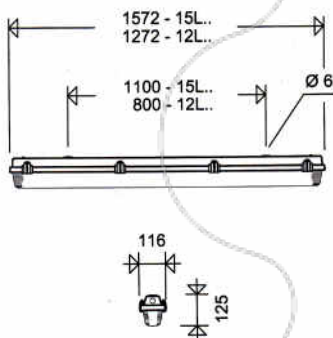
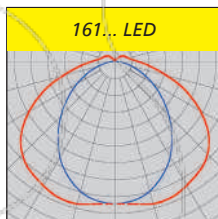
**Ambient temperature:** -5°C up to +30°C (maintained operation)

### Options:

- 6.500K
- for higher ambient temperatures
- according to „International Featured Standard Food“ (IFS Food)
- for application in food industrie (LM)
- PC-diffuser frosted (FPC)
- dimmable, DALI-interface (DIMD)
- With DALI-Emergency-Electronic Device for centralized Control and Monitoring (MA-Z)
- Through-wiring
- 4-conductor: L1, L1', N, PE or
- 6-conductor: L1, L1', L2', L3', N, PE



**Installation:** connect battery conductor  
**Decommission:** disconnect battery conductor



### SCHUCH quality - your advantage:

- highest efficiency with luminous efficacy up to 145lm/W
- safety, 100 % luminous flux at low ambient temperatures
- homogeneous illumination by using frosted diffusers, no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour reproduction  $R_a > 80$ , according to the workplace guide lines suitable for nearly all plant locations
- low maintenance and downtime costs due to long maintenance intervals
- ECG and reflector with LED modules may be replaced by qualified personal on-site
- future proof by using LED-modules according to Zhaga standard

Article no.	Type	Power consumption [W] * (incl. battery charge)	Luminous flux [lm] *	Luminous flux [lm] * (emergency operation)	Luminous efficacy [lm/W]	Operating time 1h	Operating time 3h	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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## 161 ../. MA



### with self-contained battery and automatic self-monitoring

16118 0331	161 12L22/1 MA	17	2.300	910	135	•	•	A++	1 x 36W	3,1
16118 0332	161 15L34/1 MA	26	3.760	900	145	•	•	A++	1 x 58W	3,8
16118 0333	161 12L42/1 MA	32	4.390	910	137	•	•	A++	2 x 36W	3,1
16118 0334	161 15L60/1 MA	45	6.290	900	140	•	•	A++	2 x 58W	3,8
16118 0341	161 12L22/3 MA	18	2.300	870	128	•	•	A++	1 x 36W	3,5
16118 0342	161 15L34/3 MA	27	3.760	870	139	•	•	A++	1 x 58W	4,2
16118 0343	161 12L42/3 MA	33	4.390	870	133	•	•	A++	2 x 36W	3,5
16118 0344	161 15L60/3 MA	46	6.290	870	137	•	•	A++	2 x 58W	4,2

\* see notes \*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series 161/162.. LED“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## Dustproof/Waterproof LED Light Fitting with Diffuser for high ambient temperatures up to +50°C Series 161/162 .. H50

### Application:

For humid and dusty rooms with high ambient temperatures as emergency and safety illumination and for illuminating and identifying escape routes.

### Mechanical:

**Housing:** Glass fibre reinforced polyester resin, silicone gasket.

**Diffuser:** Injected, acrylic glass, frosted.

**Closure:** Three-part captive plastic clips (KK), incl. 2 safety clips (KKS) to ensure protection against contact.

**Reflector:** Aluminium, painted can be

suspended or removed and carries the electrical components.

**Emergency light components** installed in a separate glass fibre reinforced polyester box (BR 10150) which is mounted to a carrier rail together with the light fitting as one unit.

**Connection:** 6-pole terminal for one-sided loop-in/loop-out wiring with 2 plastic cable glands M20 x 1,5

**Mounting:** Direct ceiling or wall mount or rope/chain mount with eye bolts or hooks.

### Technical Data:

**LED:** Line modules 4.000K,  $R_a > 80$ , life of operation  $L_{80} > 50.000h$  at max. ambient temperature. (see notes)

**Incorporated NiCd battery,** electronic charger, short circuit protected battery and reverse battery protection

**Electronic deep discharge protection:** acc. to EN 61347-2-7

**Re-charging time:** 24h, acc. to EN 60598-2-22

**Automatic monitoring** the emergency light fitting according to EN 62034, indication of the test results by 2-coloured LED (luminescence diode) at the luminaire.

### Mode of operation:

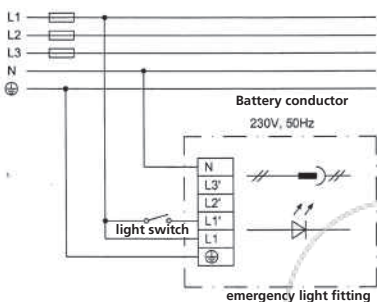
**maintained operation** = switching over to battery operation in case of mains failure, linear modules will be operated with reduced luminous flux as emergency lighting.

**Connection voltage:** 220-240V, 50/60Hz

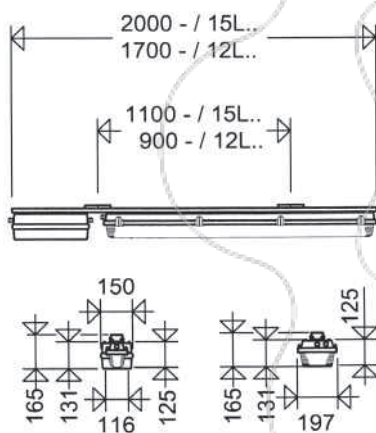
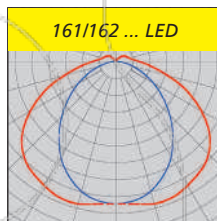
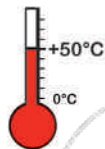
**Ambient temperature:** 0°C up to +50°C (maintained operation)

### Options:

- 6.500K
- according to „International Featured Standard Food“ (IFS Food)
- for application in food industrie (LM)
- PC-diffuser frosted (FPC)



Installation: connect battery conductor  
Decommission: disconnect battery conductor



### Schuch Quality – your advantage

- highest efficiency / light output up to 154lm/W
- always ready for operation due to permanent trickle charge of the battery
- safety in case of emergency, instant light with maximum light output
- homogeneous illumination by using frosted diffusers, no particular light points visible, comfortable perception of light, brilliant glare limitation
- high colour reproduction  $R_a > 80$ , according to the workplace guide lines suitable for nearly all plant locations
- low maintenance and downtime costs due to long maintenance intervals
- ECG and reflector with LED modules may be replaced by qualified personnel
- future proof by using standardized LED-modules (Zahga)

Article no.	Type	Power consumption [W]* (incl. battery charge)	Luminous flux [lm]*	Luminous flux [lm]* (emergency operation)	Luminous efficacy [lm/W]	Operating hours 1h	Operating hours 3h	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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## 161/162 ..L../. H50 MA



### with self-contained battery and automatic self-monitoring

16121 0001	161 12L22/1 H50 MA	18	2.670	940	148	•		A++	1 x 36W	8,0
16121 0002	161 15L34/1 H50 MA	23	3.450	940	150	•		A++	1 x 58W	8,9
16222 0001	162 12L42/1 H50 MA	29	4.250	930	147	•		A++	2 x 36W	8,6
16222 0002	162 15L60/1 H50 MA	39	6.000	950	154	•		A++	2 x 58W	9,6
16121 0003	161 12L22/3 H50 MA	19	2.670	900	141		•	A++	1 x 36W	7,4
16121 0004	161 15L34/3 H50 MA	24	3.450	920	144		•	A++	1 x 58W	8,2
16222 0003	162 12L42/3 H50 MA	30	4.250	890	142		•	A++	2 x 36W	9,0
16222 0004	162 15L60/3 H50 MA	40	6.000	920	150		•	A++	2 x 58W	10,0

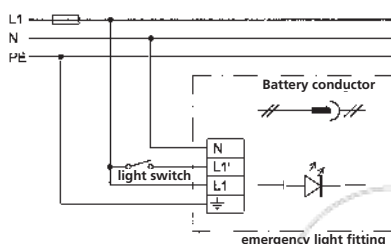
\* see notes \*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series 161/162.. L..“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.

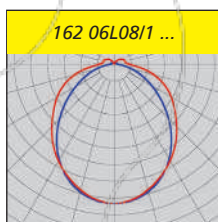
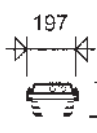
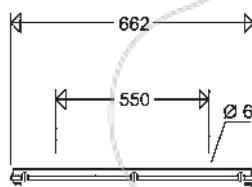
### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



**Installation:** connect battery conductor  
**Decommission:** disconnect battery conductor



## LED- Emergency Light Fitting for wide temperature range from -40°C up to +45/50°C Series 162 ...H/T..

### Application:

Illumination of escape routes especially in areas with low or high ambient temperatures or with extreme variations in temperature. Wind power stations in towers, gondolas or on platforms. On- and offshore applications.

### Mechanical Design:

**Housing:** Glass fibre reinforced polyester resin. Silicone gasket.  
**Cover:** PMMA frosted.

**Closure:** Threepart captive plastic clips (KK).

**Reflector:** White sheet steel, detachable. Electrical components mounted on the reflector. Quarter-turn locks for quick release and assembly. Suspension cords.

**Connection:** 4-pole terminal.

**Cable entry:** 2 blanking plugs M20.

**Mounting:** Closed knock-outs, for direct ceiling mount, sealing and pressure disks inside each fitting.

### Technical Data:

**LED:** Line modul 4.000K, R<sub>a</sub>80, life expectancy L<sub>80</sub> > 50.000h, at max. ambient temperature (see notes)

**NiCd-Battery:** 4,8V 4 Ah, maintenance-free, timed charging and a constant trickle charge to the battery ensures readiness of operation at all times. Battery heating (approx. 40W) with overload protection for safe function of the battery at temperatures down to -40°C (version T40).

**Reverse battery protection.**

**Electronic deep discharge protection**

**Charging period** 24h according EN 60598-2-22.

**Automatic monitoring** of the fitting according to EN 62034. Test results indicated by 2 colour LED.

### Operating modes:

**Maintained Mode:** Switching over to battery operation in case of mains failure. LEDs will be operated with reduced luminous flux as emergency lighting.

**Stand-by Mode:** Emergency LED will switch on if mains fails.

**Operating voltage:** 230V; 50/60Hz

**Ambient temperature H50/T40:** -5/-40°C up to +45°C in maintained mode  
-0/-40°C up to +50°C in stand-by mode

### Options:

- stainless steel clips (KE)
- PC-diffuser frosted (FPC)
- other voltages, e.g. 110V, 1 - 120V, 277V
- for same side in/out wiring: 2 cable entries on one side with 2 cable glands M20 x 1,5 (to save the classical through wiring system)
- for outdoor areas (AUS)

### SCHUCH quality - your advantage:

- homogeneous illumination by using frosted diffusers, no particular light points visible, comfortable perception of light, brilliant glare limitation
- high colour reproduction Ra > 80, according to the workplace guide lines suitable for nearly all plant locations
- the special design of version T40 ensures an emergency operation of 1 hour even at -40°C
- constant luminous flux in emergency mode independent from ambient temperature
- 10- to 40-times higher light output at -40 °C compared to the T26/18W-version
- suitable for offshore-applications (salt spray test severity level 2)
- ECG and reflector with LED-modules can be replaced by qualified personnel on-site
- future proof by using standardized LED-modules (Zahga)

### Notes:

**Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.**

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous flux [lm] (emergency mode)	Luminous efficacy [lm/W]	Operating time 1h	Operating time 3h	Energy efficiency class	Weight [kg] without packing material
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## 162 06L08/1 ... MA



### with self-contained battery with automatic self-monitoring

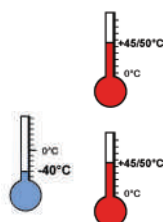
for high ambient temperatures from -5°C/0°C up to +45/50°C

16218 0031	162 06L08/1 H50 MA	11	780	570	71	•		A++	4,4
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for broad temperature range from -40°C/0°C up to +45/50°C

16218 0032	162 06L08/1 T40 MA	11	780	570	71	•		A++	4,4
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\* see notes



## Dustproof/Waterproof LED Emergency Light Fitting with Diffuser Series 163 .. Generation 2

### Application:

At workplaces as emergency- and safety lighting as well as for illuminating escape routes etc.

### Mechanical Design:

**Housing:** Glass fibre reinforced polyester resin, silicone gasket.

**Diffuser:** Acrylic glass for high mechanical strength, frosted, additional clear cover over the LED-modules to ensure protection against contact.

**Closure:** Single-part plastic clips (KK), incl.

2 safety clips (KKS)

**Reflector:** Aluminium, painted, detachable carrying the electrical components.

**Connection:** 4-pole terminal.

**Cable entries:** Variable, closed knock-outs on the short and long sides, and on the top, 2 blanking plugs M20.

**Mounting system:** 2 holes for ceiling mounting. Sealing and pressure disks for sealing are supplied inside the fitting.

### Technical data:

**LED:** Line modules 4.000K,  $R_a > 80$ , life of operation  $L_{80} > 50.000h$  at max. ambient temperature (see notes)

**Incorporated NiCd battery,** electronic charger, short circuit protected battery and reverse battery protection

**Electronic deep discharge protection:** acc. to EN 61347-2-7

**Re-charging time:** 24h, acc. to EN 60598-2-22

**Automatic monitoring** the emergency light fitting according to EN 62034. Indication of the test results by 2-coloured LED (luminescence diode) at the luminaire.

### Mode of operation:

**maintained operation** = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

**Connection voltage:** 220-240V 50/60Hz

**Ambient temperature:** -5°C up to +30°C (maintained operation)

### Options:

- 6.500 K

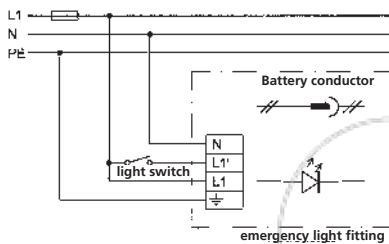
- according to „International Featured Standard Food“ (IFS Food)

- Through-wiring

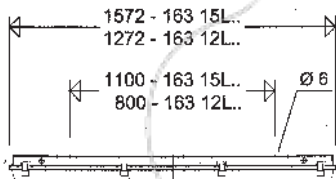
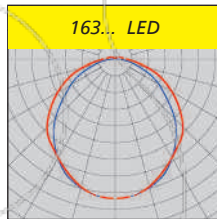
4-conductor: L1, L1', N, PE or

6-conductor: L1, L1', L2', L3', N, PE

- With DALI-Emergency-Electronic Device for centralized Control and Monitoring (MA-Z)



**Installation:** connect battery conductor  
**Decommission:** disconnect battery conductor



### Advantages of the LED version:

- highest efficiency with luminous efficacy up to 147lm/W
- safety, 100 % luminous flux at low ambient temperatures
- homogeneous illumination by using the new, frosted diffusers, no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour reproduction  $R_a > 80$ , according to the workplace guide lines suitable for nearly all plant locations
- lower maintenance and downtime costs due to long maintenance intervals
- ECG and reflector with LED-modules can be replaced by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard

Article no.	Type	Power consumption [W] * (incl. battery charge)	Luminous flux [lm] *	Luminous flux [lm] * (emergency operation)	Luminous efficacy [lm/W]	Operating time 1h	Operating time 3h	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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## 163 ..G2/. MA



### with self-contained battery and automatic self-monitoring

16307 0031	163 12L22G2/1 MA	17	2.250	830	132	•		A++	1 x 36W	2,6
16307 0032	163 15L34G2/1 MA	27	3.700	890	137	•		A++	1 x 58W	3,0
16307 0033	163 12L42G2/1 MA	31	4.290	830	138	•		A++	2 x 36W	2,6
16307 0034	163 15L60G2/1 MA	46	6.180	890	134	•		A++	2 x 58W	3,0
16307 0035	163 15L34G2/3 MA	28	3.700	850	132		•	A++	1 x 58W	3,4
16307 0036	163 15L60G2/3 MA	47	6.180	850	131		•	A++	2 x 58W	3,4

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series 163/164... LED“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.

## Compact LED Emergency/Escape Sign Light Fitting Series 164KL ...

### Application:

In humid, wet and dusty locations in commercial and industrial premises etc., for emergency lighting as well as for illuminating and indicating any escape routes.

### Design:

**Housing:** Glass fibre reinforced polyester, silicone gasket.

**Diffuser:** PMMA frosted for glare limitation, version ... 201 opalescent white (W). (Pictograms – if required – to be orde-

red separately, see accessories).

**Clips:** Single-piece plastic clips (KK).

**Reflector:** Painted aluminium, can be suspended or removed and carries the electrical component.

**Connection terminal:** 3 or 4 poles.

**Cable entries:** Variable, on the short sides and on the top, 2 plugs M20.

**Mounting:** 2 mounting points, rubber gasket and washers included.

### Technical Data:

**LED:** High power LED, white, 6.500K,  $R_a > 70$  (version ...201) or line modul 4.000K,  $R_a > 80$  (versions ...L...), life expectancy  $L_{80} > 50.000$ h, at max. ambient temperature (see notes)

**Battery** NiMH (version ...201) or NiCd (version ... L08/), a constant trickle charge to the battery ensures readiness of operation at all times.

**Electronic deep discharge protection** according to EN 61347-2-7

**Charging period** 24h according EN 60598-2-22.

**Automatic monitoring** of the fitting according to EN 62034. Test results indicated by 2 colour LED.

### Operating modes:

**Maintained Mode:** Switch over to battery back up in case of mains fail.

Version ... L08/ will operate at a reduced luminous flux.

**Stand-by Mode:** LED modules will switch on if mains fails.

**Operating voltage:** 220-240V; 50/60Hz

**Ambient temperature:** -5 to +30°C in maintained mode  
-0 to +40°C in stand-by mode

### Options:

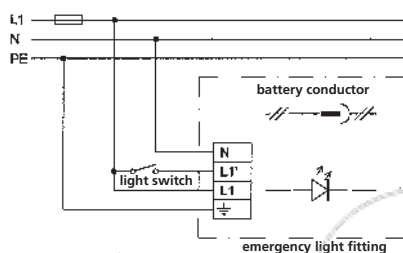
- stainless steel clips (KE)
- Cable entries to M25x1.5

**for series in case of connection to central power supply unit:**

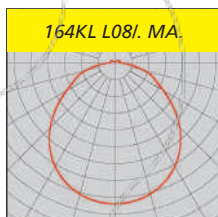
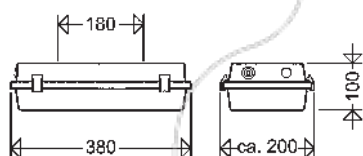
- with integrated LED supply- and monitoring module for monitoring individual light fittings connected to group- or central battery systems. We recommend systems of make INOTEC.



### Wiring diagram maintained/stand by operation



**Installation:** connect battery conductor  
**Decommission:** disconnect battery conductor  
**Stand-by operation:** do not connect L1



### SCHUCH Quality - your advantage:

- high end light fitting with excellent mechanical strenght
- up to 47 % energy savings compared to an 11W Kompakt-fluorescent tube (versions ...L08....)
- safety, 100 % luminous flux at low ambient temperatures
- constant light output at all specified ambient temperatures
- excellent illumination of the pictogram. According to EN 1838 and DIN 4844
- 100% or 60% luminous flux in emergency mode

Article no.	Type	Power consumption [W] * (incl. battery charge)	Luminous flux [lm] *	Luminous flux [lm] * (emergency operation)	Luminous efficacy [lm/W]	Light fitting for pictogram	Operating hours 1h	Operating hours 3h	Energy efficiency class	Substitute for **	Weight [kg] (without packingmaterial)
16408 0001	164KL 201/1 W MA	5,0	180	180	36	• •	•	•	A++	---	1,1
16408 0002	164KL 201/3 W MA	5,0	180	180	36	•	•	•	A++	---	1,6
16408 0041	164KL L08G2/1 MA	10,0	820	500	82	•	•	•	A++	1 x 11W	1,4
16408 0042	164KL L08G2/3 MA	11,0	820	490	75	•	•	•	A++	1 x 11W	1,6

## 164KL .../. MA



with self-contained battery and automatic self-monitoring

16408 0001	164KL 201/1 W MA	5,0	180	180	36	• •	•	•	A++	---	1,1
16408 0002	164KL 201/3 W MA	5,0	180	180	36	•	•	•	A++	---	1,6
16408 0041	164KL L08G2/1 MA	10,0	820	500	82	•	•	•	A++	1 x 11W	1,4
16408 0042	164KL L08G2/3 MA	11,0	820	490	75	•	•	•	A++	1 x 11W	1,6

\* see notes \*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W] * (incl. battery charge)	Luminous flux [lm] *	Luminous flux [lm] * (emergency operation)	Luminous efficacy [lm/W]	Light fitting for pictogram	Operating hours 1h	Operating hours 3h	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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## 164KL... ZB



### for central battery systems

#### Application:

For connection to group or central battery systems or to an emergency mains for illuminating and identifying escape

routes. We recommend Central Battery Systems from INOTEC.

#### Technical Data:

ECG: For operation on 220-240V, 50/60Hz and 220V DC with incorporated fuse for selective cut-off in case of failure according to DIN EN 60598-2-22, section 22.7.3.



series 164... W KL LED with pictogram

16408 0003	<b>164KL 201 W ZB</b>	4,0	180	180	45	•			A++	---	0,9
16408 0031	<b>164KL L05G2 ZB</b>	4,5	490	490	109				A++	1 x 8W	1,0
16408 0032	<b>164KL L08G2 ZB</b>	8,5	840	840	99				A++	1 x 11W	1,0
16408 0033	<b>164KL L11G2 ZB</b>	10,0	1.150	1.150	115				A++	1 x 18W	1,0
16408 0034	<b>164KL L15G2 ZB</b>	14,0	1.490	1.490	106				A++	1 x 24W	1,0

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

#### Self-adhesive pictogram green/transparent<sup>1)</sup>

	121/32
	121/33
	121/34
	121/35
	121/36
	121/37
	121/38
	121/39

for light fittings with white opalescent glass windows for escape route signs acc. to DIN EN ISO 7010 und ASR A1.3.

Viewing distance = 30 m.

## Accessories / Spare Parts

Article no.	Type	
<b>Spare glasses</b>		
16413 9001	<b>164000 W</b>	PMMA white opalescent for 164KL... W
16413 9006	<b>164000 F</b>	PMMA frosted for 164KL L...
16413 9007	<b>164000 F G2</b>	PMMA frosted for 164KL L... G2
<b>Brackets</b>		
90232 0004	<b>DA</b>	ceiling bracket
<b>Self-adhesive pictograms</b>		
12112 0025	<b>121/32</b>	emergency EXIT „up“
12112 0026	<b>121/33</b>	emergency EXIT „left“
12112 0027	<b>121/34</b>	emergency EXIT „right“
12112 0028	<b>121/35</b>	emergency EXIT „below“
12112 0029	<b>121/36</b>	emergency EXIT „up-left“
12112 0030	<b>121/37</b>	emergency EXIT „up-right“
12112 0031	<b>121/38</b>	emergency EXIT „down-left“
12112 0032	<b>121/39</b>	emergency EXIT „down-right“

Further accessories and spare parts see section „Dustproof/Waterproof LED Light Fitting“ Series 164KL... in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.



## Small Impact Resistant LED Emergency/Escape Sign Light Fitting Series 131 ... LED

### Application:

In humid, wet and dusty locations in commercial and industrial premises etc. for emergency lighting as well as for illuminating and indicating the escape routes. Mechanical

### Design:

**Housing:** White polycarbonate.

**Diffuser:** Polycarbonate, ... 201 ...

versions opalescent white (W). Hinged and detachable at one end and closed

at the other end with captive stainless steel screw. (Pictograms to be ordered separately see accessories)

**Reflector:** Aluminium white painted.

**Connection:** 3- or 4-poles.

**Cable entries:** 1 blanking plug M20 at each end.

**Mounting system:** 2 holes for ceiling mounting. Sealing and pressure disks inside each fitting.

### Technical data:

**LED:** Highpower-LED 6.500K,  $R_a > 70$  (versions ... 201) or line modules 4.000K  $R_a > 80$  (versions 131 L... ZB), life expectancy  $L_{80} > 50.000h$  at max. ambient temperature (see notes).

**NiMH battery** mounted on the reflector. A constant trickle charge to the battery ensures readiness of operation at all times.

**Electronic deep discharge protection** acc. to EN 61347-2-7

**Recharging time:** 24 h, acc. to EN 60598-2-22.

**Automatic monitoring** the emergency light fitting acc. to EN 62034. Indication of the test results by 2-colour LED on the light fitting.

### Modes of operation:

**Maintained operation:** Switch over to battery operation in case of mains failure.

**Stand-by operation:** Emergency light switches on in case of mains failure.

**Connection voltage:** 220-240V, 50/60Hz

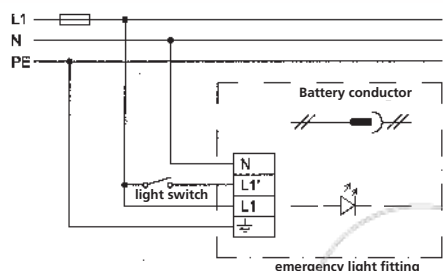
**Ambient temperatures:** -5°C up to +30°C for maintained version  
0°C up to +40°C for stand-by version

### Options:

#### in case of connection to a central power

– with separate LED supply- and monitoring module for monitoring individual light fittings connected to group- or central battery systems. **We recommend Central Battery Systems from INOTEC.**

### Wiring diagram maintained/stand by operation

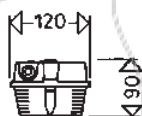
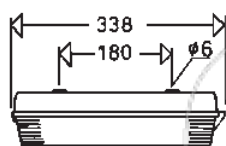


**Installation:** connect battery conductor

**Decommission:** disconnect battery conductor

**Stand-by operation:** do not connect L1

### series 131...



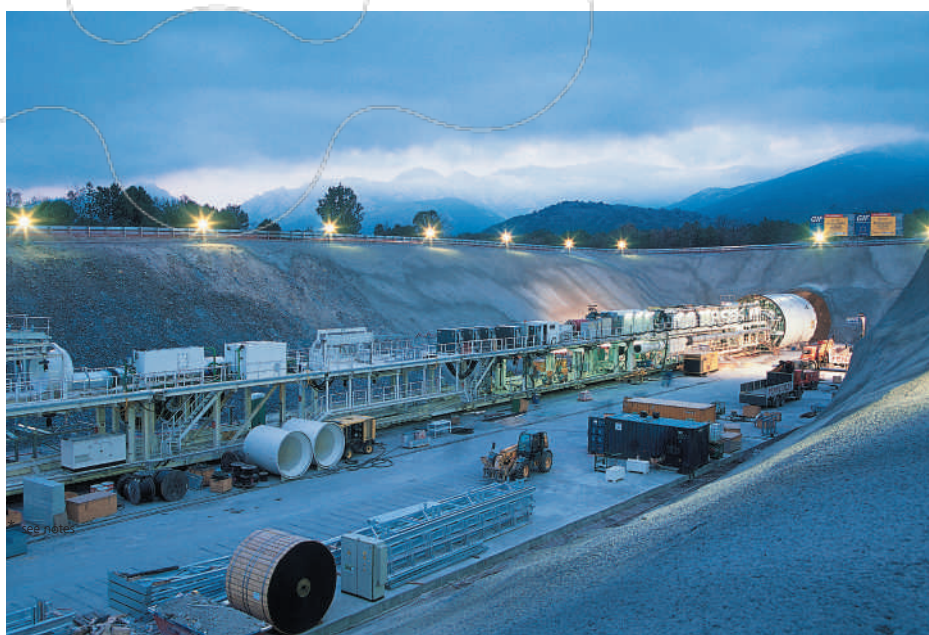
### SCHUCH quality - your advantage:

- up to 47% energy savings compared to an 11W compact fluorescent tube (version ...L07)
- safety in an emergency, immediate full light (100% luminous flux) even at low temperatures
- stable luminous flux in the emergency operation independent from the ambient temperature
- outstanding even illumination of the pictogram, fulfills EN 1838 and DIN 4844
- reduced battery capacity
- little thermal stress
- low weight
- almost maintenance-free operation due to long operation life of the LED (≥ 50,000h)
- no costs for lamp replacement

### Notes:

**Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.**

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption * with battery charge) [W]	Luminous flux * [lm]	Luminous flux * (mains/ emergency) [lm]	Luminous efficacy [lm/W]	light fitting for pictogram	Operating time 1h	Operating time 3h	Energy efficiency class	Substitute for ca. **	Weight [kg] without packing material
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## 131 ... / . W MA



with self-contained battery and automatic self-monitoring

13112 0100	131 201/1 W MA	5,0	180	180	36	•	•		A++	---	1,0
13112 0101	131 201/3 W MA	5,0	180	180	36	•		•	A++	---	1,2
13112 0110	131 L03/1 MA	5,0	300	300	60		•		A++	1 x 8W	1,0
13112 0111	131 L03/3 MA	5,0	300	300	60			•	A++	1 x 8W	1,2

New

## 131 ... ZB



for connection to central power supply unit

### Application:

For connection to group or central battery systems or to emergency mains for illuminating and identifying escape

routes. We recommend Central Battery Systems from INOTEC.

### Technical data:

ECG: For operation on 220-240V AC and 220V DC with incorporated fuse for selective cutting off in case of failure according to DIN EN 60598-2-22, VDE 0711-2-22, section 22.7.3..

13112 0001	131 201 W ZB	4,0	180	180	45	•			A++	---	0,4
13112 0011	131 L04 ZB	4,0	450	450	113				A++	1 x 8W	0,5
13112 0012	131 L07 ZB	8,0	770	770	109				A++	1 x 11W	0,5
13112 0013	131 L10 ZB	9,5	1.040	1.040	109				A++	1 x 18W	0,5
13112 0014	131 L13 ZB	13,0	1.370	1.370	105				A++	2 x 11W	0,5

\* see notes \*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

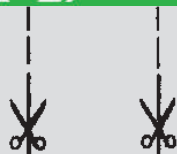


Series 131... W LED with pictogram

### Self-adhesive pictogram

for identification of escape routes according to DIN EN ISO 7010 und ASR A1.3.

Viewing = 15m.



## Accessories / Spare Parts

Article no.	Type	
<b>Spare glasses</b>		
13111 9001	131000W	PC opalescent white for 131... W
13111 9006	131000F	PC frosted for 131 L...
<b>Standard pictogram, self-adhesive</b>		
90011 0002	265/76/3	for 131... W

Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series 130/131 ... LED“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.



## Compact Emergency and Escape Sign Light Fitting with Highpower-LED Series 3611 ...

### Application:

Humid, wet and dusty locations in the trade, commerce and industry for emergency lighting as well as for illuminating and indicating any escape routes.

### Design:

**Housing:** Die cast aluminium, white. All electrical components located inside the housing, wired ready for connection.

**Cover:** PC frosted, silicone gasket. As

indication sign light fitting with white opalescent PC glass (W) and pictogram. (Please order separately, see „Spare parts“).

**Connection terminal:** 3 or 4 poles.

**Cable entry:** 1 plug M20 on the front side.

**Mounting:** 2 outer fastening points.

### Technical data:

**LED:** High power LED, white, 6.500K,  $R_a > 70$  (version ...201) or line modul 4.000K,  $R_a > 80$  (versions ...L...), life expectancy  $L_{80} > 50.000h$ , at max. ambient temperature (see notes)

**Built-in NiMH battery:** A constant trickle charge to the battery ensures readiness of operation at all times.

**Electronic deep discharge protection:** acc. to EN 61347-2-7

**Recharging time:** 24 hours, acc. to EN 60598-2-22.

**Automatic monitoring** of the emergency light fitting acc. to EN 62034. The test results are indicated by a two-colour LED on the fitting.

### Modes of operation:

**Stand-by operation:** Emergency light switches on in case of mains failure

**Maintained operation:** Switching over to battery operation in case of mains failure

**Voltage:** 220-240V, 50/60Hz.

**Ambient temperature:** -5°C up to +30°C in stand-by operation  
0°C up to +40°C in maintained operation

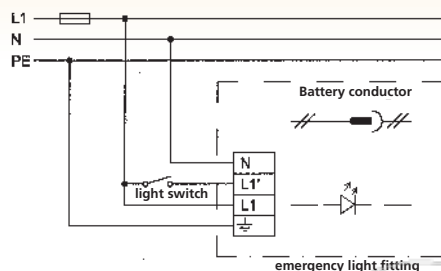
### Options:

– same side in/out wiring (2 entries at one side M20 x 1,5)

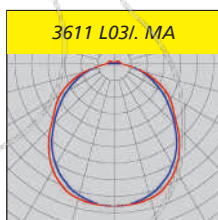
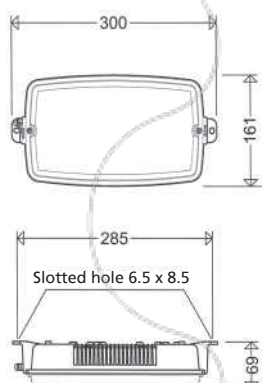
**in case of connection to a central power supply unit:**

– with integrated LED supply- and monitoring module for monitoring individual light fittings connected to group- or central battery systems. We recommend Central Battery Systems from INOTEC.

### Wiring diagram maintained/stand by operation



**Installation:** connect battery conductor  
**Decommission:** disconnect battery conductor  
**Stand-by operation:** do not connect L1'



### SCHUCH Quality - Your advantage:

- up to 71% energy saving in comparison with an 8W fluorescent lamp
- safety in an emergency, immediate full light (100% luminous flux) even at low temperatures
- stable luminous flux in the emergency operation independent from the ambient temperature
- outstanding even illumination of the pictogram, fulfills EN 1838 and DIN 4844
- reduced battery capacity
- little thermal stress
- low weight
- almost maintenance-free operation due to long operation life of the LED ( $\geq 50,000h$ )
- no costs for lamp replacement

Article no.	Type	Power consumption [W] * (incl. battery charge)	Luminous flux [lm] *	Luminous flux [lm] * (emergency mode)	Luminous efficacy [lm/W]	Suitable for pictogram	1h operating time	3h operating time	Energy efficiency class	Weight [kg] (without packing material)
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## 3611 .../. MA



### with incorporated battery set and monitoring system

36111 0011	3611 201/1 W MA	5,0	100	100	20	•	•		A++	1,0
36111 0012	3611 201/3 W MA	5,0	100	100	20	•		•	A++	1,4
36111 0033	3611 L03/1 MA	5,0	280	280	56		•		A++	1,1
36111 0034	3611 L03/3 MA	5,0	280	280	56			•	A++	1,2

\* see notes.

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W] * (incl. battery charge)	Luminous flux [lm] *	Luminous flux [lm] * (emergency mode)	Luminous efficacy [lm/W]	Suitable for pictogram	1h operating time	3h operating time	Energy efficiency class	Weight [kg] (without packing material)
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## 3611 ... ZB



for connection to central power supply unit

### Application:

For connection to group or central battery systems or to an emergency mains for illuminating and identification of

escape routes. We recommend Central Battery Systems from INOTEC.

### Technical data:

ECG: For operation on 220-240V, 50/60Hz and 220V DC with incorporated fuse for cutting off in case of failure according to DIN EN 60598-2-22, VDE 0711-2-22, section 22.7.3.

36111 0016	<b>3611 201 W ZB</b>	4,0	100	100	25	•			A++	0,9
36111 0035	<b>3611 L05 ZB</b>	5,0	550	550	110				A++	0,9
36111 0036	<b>3611 L10 ZB</b>	10,0	970	970	97				A++	1,0

\* see notes



Type 3611 ... with pictogram

### Self-adhesive pictogram



220/110/33 .../34 .../35

For marking escape routes acc.to DIN EN ISO 7010 and ASR A1.3.

Viewing distance = 22m.

## Accessories / Spare Parts

Article No.	Type	
<b>spare diffusers</b>		
36004 9003	<b>3611/03</b>	PC, frosted
36004 9002	<b>3611/02</b>	PC, white opalescent
<b>Self adhesive legends</b>		
12112 0101	<b>220/110/33</b>	Emergency exit to the left
12112 0102	<b>220/110/34</b>	Emergency exit to the right
12112 0103	<b>220/110/35</b>	Emergency exit below

Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series 3611 ... LED“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.

## Zone Classification

(acc. to the standards 1999/92/EG)

Hazardous areas are classified into the following zones in accordance with the probability of the existence of an explosive atmosphere:

### Gases, vapours or mists

- Zone 0** An area in which an explosive atmosphere is present either or over long periods or frequently as a mixture of air and combustible gases, vapours or mists.
- Zone 1** An area where under normal operating conditions an explosive atmosphere may occasionally be present as a mixture of air and combustible gases, vapours or mists.
- Zone 2** An area where an explosive atmosphere is not likely to be present under normal operation but if it should occur for some reason it would normally only exist for a short time as a mixture of air and combustible gases, vapours or mists.
- Dusts**
- Zone 20** An area in which an explosive atmosphere is present either continuously or over a long time or frequently as a cloud of combustible dust in the air.
- Zone 21** An area where under normal operating conditions an explosive atmosphere may occasionally be present as a cloud of combustible dust in the air.
- Zone 22** An area where an explosive atmosphere is not likely to be present under normal operation but if it should occur for some reason it would normally only exist for a short time as a cloud of combustible dust in the air.

## ATEX Equipment

### Temperature classes acc. to IEC 60079-0

An important parameter for the subdivision of the gases is the ignition temperature.

The ignition temperature is the lowest surface temperature value which ignites an explosive atmosphere. The maximum surface temperature must always be lower than the ignition temperatures of the gas-air or vapour-air mixture in which the product is applied.

Temperature classification	Maximum permissible surface temperatures of equipment [°C]	Ignition temperatures of inflammable substances [°C]
T1	450	> 450
T2	300	> 300 ≤ 450
T3	200	> 200 ≤ 300
T4	135	> 135 ≤ 200
T5	100	> 100 ≤ 135
T6	85	> 85 ≤ 100

## Classification of Gases and Vapours into Explosion Groups and Temperature Classes

Explosion group	Classification of gases and vapours into temperature classes					
	T1	T2	T3	T4	T5	T6
IIA	Acetone	i-amyl acetate	Gasoline	Acetaldehyde	-	
	Ethane	n-butane	Diesel fuel			
	Ethyl acetate	n-butyl	Aviation fuel			
	Ammonia	alcohol	Heating oils			
	Ethyl chloride	Cyclohexane	n-hexane			
	Benzol	1,2-dichloroethane				
	Acetic acid	Acetic anhydride				
	Carbon monoxide					
	Methanol					
	Methyl chloride					
	Naphtalene					
	Phenol					
	Propane					
	Toluol					
IIB	Town gas	Ethylene Ethyl alcohol	Hydrogen sulphide	Ethyl ether	-	
IIC	Hydrogen	Acetylene			-	Carbon disphide
I	Methane					

## Catagories of appliances

Acc. to the ATEX standards (94/9/EG) the appliances for application in their relative zones are classified into catagories. Similar to the different zones there are three different catagories for group II of the equipment. Consequently, the explosion protected products can be allocated to the ex-zones existing in the production area.

**Catagory 1** comprises appliances which have been designed in such a way that they may be operated in compliance with the characteristic sizes given by the manufacturer and which ensure a high degree of safety. Appliances of this catagory may be used in ZONES 0 and 20 as per their certification.

**Catagory 2** comprises appliances which have been designed in such a way that they may be operated in compliance with the characteristic sizes given by the manufacturer and which ensure a high degree of safety. Appliances of this catagory may be used in ZONES 1 and 21 as per their certification.

**Catagory 3** comprises appliances which have been designed in such a way that they can be operated in compliance with the characteristic sizes given by the manufacturer and which ensure a standard level of safety. Appliances of this catagory may be used in ZONES 1 and 21 as per their certification.

Appliances of this category may be used in ZONES 2 and 22 as per their certification. DIN EN 61241-14 make a difference between conductive and non-conductive dusts. For conductive dusts of ZONE 22 appliances of catagory 2 D must be used.


















## Modes of Protection

### according to European/IEC Standards

In areas where explosive atmospheres may occur despite the explosion protection measures employed, only explosion protected electrical equipment must be used.

<b>EN 60079-7</b>	- stands for: „Increased safety“	- code: „e“
<b>EN 60079-1</b>	- stands for: „Flameproof enclosure“	- code: „d“
<b>EN 60079-5</b>	- stands for: „Sand filling“	- code: „q“
<b>EN 60079-2</b>	- stands for: „Pressurised apparatus“	- code: „p“
<b>EN 60079-11</b>	- stands for: „Intrinsic safety“	- code: „i“
<b>EN 60079-18</b>	- stands for: „Moulding“	- code: „m“
<b>EN 60079-15</b>	- stands for: „Zone 2“	- code: „n“
<b>EN 60079-28</b>	- stands for: „Limitation of optical radiation“	- code: „op is“
<b>EN 60079-31</b>	- stands for: „Protection by enclosure“	- code: „t“

## Table of ingress protection

	1 <sup>st</sup> CHARACTERISTIC NUMERAL	2 <sup>nd</sup> CHARACTERISTIC NUMERAL	Symbol
RA- TING	PROTECTION AGAINST FOREIGN BODIES	PROTECTION AGAINST HARMFUL ENTRY OF WATER	
<b>IP 20</b>	solid objects > 12 mm	non-protected	
<b>IP 23</b>	solid objects > 12 mm	protected against spraying water	
<b>IP 40</b>	solid objects > 1 mm	non-protected	
<b>IP 43</b>	solid objects > 1 mm	protected against spraying water	
<b>IP 44</b>	solid objects > 1 mm	protected against splashing water	
<b>IP 54</b>	dust protected	protected against spraying water	 
<b>IP 55</b>	dust protected	protected against water jets	  
<b>IP 65</b>	dust tight	protected against water jets	  
<b>IP 66</b>	dust tight	protected against heavy seas	  
<b>IP 67</b>	dust tight	protected against effects of immersion in water between 15cm and 1m for 30 minutes	  
<b>IP 68</b>	dust tight	protected against effects of immersion in water under pressure for long periods	
<b>IPx9k</b>	dust tight	protected against effects of high pressure water jets	

## Plastics in SCHUCH luminaires

### Plastics in SCHUCH luminaires

The bodies of most SCHUCH luminaires are made of glass fibre reinforced polyester. This material is heat resistant, mechanically stable, electrically insulating, weather-resistant and chemically resistant.

The covers of the luminaires is made of the following materials: silicate glass, polycarbonate(PC) or polymethyl methacrylate (PMMA).

Based on the current state of the art and the information provided by the respective material manufacturers, the following table shows the resistance of PMMA and

PC against various chemicals. Experience shows that the temperature of chemical (aggression) substances often plays a significant role.

Parts made of PC are impact resistant and more resistant to heat than parts made of PMMA. PC is not resistant against all chemical agents. For cleaning, we recommend warm water with a mild detergent. Subsequently the material should be thoroughly rinsed with clean water. The PH value must be less than 7.5.

Due to this no soap or similar must be used.

Material	Poly- methylacrylat (PMMA)	Polycarbonat (PC)	Thermoplasti- sches Polyester (PBT)
Acetone	–	–	–
Ethylalcohol (to 30 %)	o	o 96% <sup>1)</sup>	+
Battery acid	+	+	k.A.
Ammoniac	+	–	+ bis 10% <sup>1)</sup>
Boric acid 3 %	+	+	k.A.
Sodium Hypochlorite	+	–	k.A.
Chlorine (moist)	–	–	k.A.
Chromium acid 10 %	o	+	k.A.
Acetic acid concentrated	–	–	–
Acetic acid (up to 10%)	+	+ < 10% <sup>1)</sup>	+
Formaldehyde (up to 10%)	o	+	k.A.
Glycerin	+	o	+
Uric acid (up to 20%)	+	k.A.	k.A.
Potassium (20-25°C)	+	–	–
Kerosene (aviation gasoline)	o/–	–	+
Sea water	+	+	+
Methyl alcohol (up to 23°C)	o/–	–	+
Lactic acid < 4%	+	+	k.A.
Sodium chloride	+	+	+ bis 10% <sup>1)</sup>
Sodium hydroxide Solution 20-25 °C	+	–	+
Petroleum	o	o	+
Phosphoric acid Concentrated	–	+ 10 bis 30% <sup>1)</sup>	+ 25% <sup>1)</sup>
Soap liquor (at 23 °C)	+	o	bis 10% OK
Sulfuric acid H2SO4	–	–	–
Sulfuric acid up to 30%	+	+	+ bis 10% <sup>1)</sup>
Sulphur dioxide dry (at 23 °C)	–	o	k.A.
Turpentine (at 23 °C)	+/o	–	+
Toluene	–	–	–
Acidity of wine	+ bis 50% <sup>1)</sup>	+ bis 10% <sup>1)</sup>	k.A.
Citric acid up to 20 %	+	+	+ bis 10% <sup>1)</sup>

Legend: + = resistant, O = limited resistant – = volatile (unstable) <sup>1)</sup> = concentration

## Yellowing of glasses made of PC

Polycarbonate (PC) is a plastic that turns brown when exposed to UV radiation. When installing the light fittings in outdoor areas the material is exposed to UV-radiation, but also bulbs may emit UV light (eg fluorescent lamps).

To delay the discoloration of the PC we are using so-called UV stabilizers in the respective materials. These stabilizers slow down the process significantly, but do not prevent it. The time course of the discoloration is dependent on the degree of exposure to UV radiation. The discoloration is not a product defect.

## Corrosion resistance of sheet steel luminaires

Our steel sheet luminaires are powder coated with a high quality polyester paint. In addition to the corrosion protection, the coating offers a very good scratch resistance. Depending on the conditions of use at the installation site, however, corrosion may still occur.

Examples are applications with permanent humidity, mounting locations close to the sea, under canopies or areas with aggressive media / chemicals. For such conditions we offer, depending on the requirement, modified versions with KTL coating, aluminium or stainless steel housing.

## Properties of LED luminaires

### Rated values as specified in data-sheets

All tolerances of rated values of luminaire input power, luminous flux and efficacy are in accordance with IEC 62722-2-1. Luminaire luminous flux is no more than 10% less than rated luminous flux. Luminaire input power is no more than 10% higher than rated input power.

### Rated life

Data-sheets provide values of rated life  $L_x$ .  $L_x$  is the time after which luminous flux has dropped to x% of initial luminous flux. At rated life  $L_x$  luminous flux equals x% of rated value. Typical values for "x" are 70 (L70) or 80 (L80). Life time metrics are based on defined test procedures. Figures given in data-sheets are expected values. Thus, the indicated rated life is not a guaranteed luminaire feature. E.g.  $L80B10 \geq 50,000h$  means that, according to statistics, 90% (100-10) of luminaires maintain at least 80% of initial luminous flux after 50,000. In so doing failures of control gear and soiled glass covers are not considered.

### Switching cycles

Frequent switching may cause an increased LED-module failure rate. In accordance with IEC rules outdoor luminaires are designed for one cycle per day. While for indoor luminaires up to three cycles per day are assumed. If it is required to switch luminaires more frequent it is recommended to employ corridor mode (DIMC). Corridor mode allows unlimited switching of luminaires.

### Use of LED luminaires in corrosive environments

Corrosive gases and other corrosive substances (e.g. ammonia, sulfuric or chlorine compounds) may damage LED light fittings. Depending on substance, concentration, temperature and exposure time, the damage may result in total failure of light fitting. Even luminaires with high degree of ingress protection can be affected since corrosive atmospheres can penetrate into all light fittings. Suitability of light fittings for particular purposes can be assessed e.g. by means of a field test.

### Mounting of protection class II LED outdoor luminaires to fixing devices with electrical insulation against earth potential.

When mounting protection class II LED light fittings to fixing devices with electrical insulation against earth potential, electrostatic charges could appear (for example, due to weather conditions) which may cause damage of control gear and/or LED modules.

None-Grounded fixing devices are, for example, wooden, concrete or plastic poles, electrically insulated mounted steel poles, wall fixations or rope suspensions.

Using protection class I light fittings is recommended in these cases. These allow electric charges to discharge via protective earth (PE) conductor. If protection class II light fittings should be installed, such light fittings should be of special design equipped with equipotential compensation. In that case, the yellow/green conductor inside the connecting cable should not make any connection between terminal box and the equipotential terminal inside light fitting.

### Overvoltage protection of LED outdoor luminaires

LED outdoor luminaires and light fittings with electronic control gear for conventional lamps are much more sensitive to surge voltages than luminaires equipped with magnetic ballasts.

Due to switching events and load changes voltages of up to 6 kV may occur in outdoor power grids.

Lightning strikes in the surroundings of outdoor installations can lead to voltages of up to many times higher than 10 kV depending on distance to light fitting and conductivity of soil.

Lightning that strikes directly into a luminaire will cause such high pulses that no cost-efficient measure can prevent failure of luminaire.

Control gear utilized by SCHUCH is having an enhanced overvoltage protection.

By installing an additional overvoltage protection device into a luminaire or into a terminal box protection level can be further increased.

Protective device that disconnects luminaire from power supply when it fails does further enhance overvoltage protection.

Regulative provisions limit higher protection levels of protection class II light fittings. It is not permitted to connect protective earth conductor to

protection class II fittings. However a comprehensive overvoltage protection is only feasible if an earth conductor would be available and housing of luminaire and pole are connected via protective earth conductor. We further recommend to install surge arresters into electrical distribution. Thus absorbing direct and indirect lightning strikes into power grids. Probability of lightning strikes varies very much locally. Should LED outdoor luminaires or conventional light fittings with electronic control gear be installed in regions with high likelihood for lightning strikes we highly recommend to utilize protection class I luminaires with additional protective measures employed in the luminaire, terminal box and electrical distribution.

### Operating restrictions for LED outdoor light fittings with power reduction

Very rarely, leakage currents may occur between the phases or between phase and neutral conductor. This may cause a false switching behavior of luminaires with power reduction via control phase. Then, the light fittings fail to switch on power reduction.

Leakage currents occur due to old or damaged cables with improper isolation or due to the high capacity coupling.

In these cases, one should install a "shunting-box" between control phase and neutral conductor (available on request). The shunting box may be installed in the terminal box or inside the electrical distribution.

When changing single luminaires in existing installations with older light fittings or when extending installations, one could face a problem related to power reduction. For these cases, one should mount additional relays at control phase entry in the already installed light fittings. In such cases, it is more cost-effective to add light fittings with stand-alone power reduction (LA => reduction without control phase).

### Inrush currents of LED light fittings – limited capacity of automatic circuit breakers

Contrary to light fittings with magnetic ballasts, LED light fittings start all at the same time (as well as in case of ECGs with conventional lamps). Inside the storage capacitor of the above ECGs, a high charging current occurs when switching on. The number of light fittings per automatic circuit breaker is limited by the inrush current rather than by the operating current.

Because inrush current peak of electronic operating devices depends on the used components and on the circuit itself, it is impossible to make a general assertion about the starting current intensity.

For the maximum number of light fittings per automatic circuit breaker, refer to: <http://www.schuch.de/en/service/photometric-files>.

### LED outdoor luminaires for utilization in security services, penal institutions etc. – instant light

Lighting installations at penal institutions, security services and military facilities require usually instant light when switching on lights. The same applies when luminaires are operated with reduced power and in the event of alarm shall be switched to full power.

For comfort reasons luminous flux of LED luminaires is usually ramped up slowly when switched on or when changing from reduced output power to full output power. For above mentioned applications modified luminaires with deactivated ramp-up-function are available on request.

### Photobiological Safety

Photobiological safety of luminaires is treated in IEC 62471:2006. This standard provides information on safety limits and risk groups for irradiation as well as measurement methods for UV-, visible and IR- spectral range. The protective goal is to prevent human eye and skin from thermal and photochemical hazards.

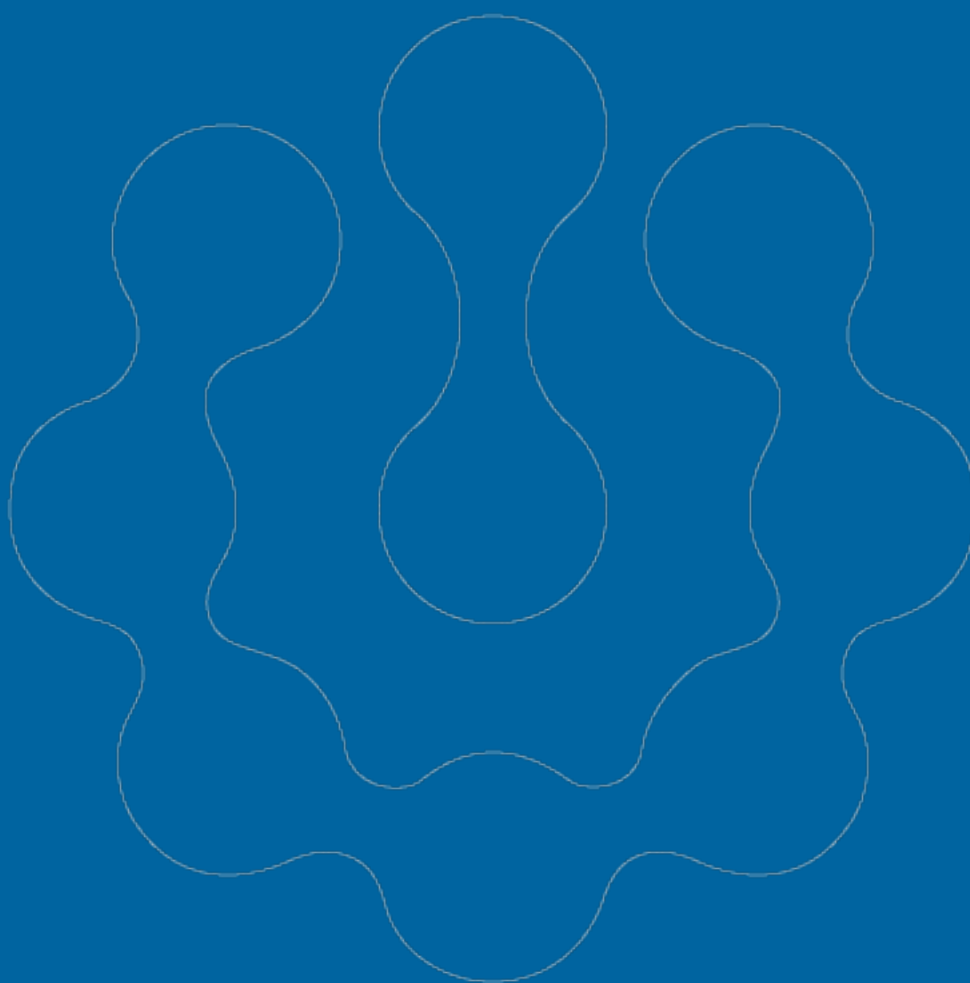
Almost all luminaires of SCHUCH are within risk groups 0 and 1. Thus they are harmless since they cannot cause any photobiological impairment to human skin or eye. Luminaires that fall under risk group 2 are marked by a pictogram "do not stare at operating light source". In addition mounting instructions provide information on minimum distance required for safe view into light fitting. Due to installation site any hazard can be ruled out for most class 2 technical luminaires since view from short distance is not possible. Duplicating distance reduces irradiation to one quarter (inverse-square law). Therefore in most cases caution may only be required during maintenance work.

Risk group 3 luminaires disqualify for approval since they would imply a non neglectable risk.

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