

Explosion protected light fittings Z-TECHNIK



LPL LED - The Bright Light for Your Safety  
Explosion protected floodlights in LED technique



**Crouse-Hinds**  
by **EAT•N**

# Ex-LED-floodlight LPL LED

(Zone 1, 2, 21, 22)

## The powerful LED floodlight for harsh operating conditions

Due to the particularly robust and solid design of the enclosure in combination with the vibration resistance of the LED module, the LPL LED floodlight is insensitive to impact, shocks, and vibrations. As a result, the LPL LED represents the ideal lighting concept for use in areas with difficult environmental conditions. Thanks to the LED technology, extreme temperatures from -36 °C up to +50 °C are not a problem. The rugged, flameproof light metal enclosure in the degree of protection IP66 and impact-resistant glass meets the highest corrosion

protection and mechanical resistance requirements.

## An efficient lighting technology

The new LPL LED lighting series offers the latest lighting technology with a high luminous flux and, at the same time, an extremely low energy requirement. The efficient LED modules provide a long service life combined with a high level of efficiency. With a power consumption of 53 W to 105 W, the LPL LED lighting series is ideal for replacing 70 W to 250 W conventional light fittings with up to 63 % energy safety, whereby, the low energy con-



sumption and the long service life (> 50,000 h) of the fixture keep operating costs pleasantly low.

## Multiple applications

The LPL LED lighting series is suitable for medium and high suspension heights. It is the ideal solution for the illumination of open spaces, indoor areas and roads in industrial installations. Further applications include on- and offshore plants

in the oil and gas industry, chemical plants, waste disposal facilities, shipyards, power stations and mills where extreme amounts of dirt and moisture and increased mechanical hazard are to be expected. A U-shaped mounting bracket for wall and ceiling installation of the LPL LED is included.



## Features

- High-power LED modules with up to 63% energy saving
- Flameproof enclosure for Zones 1, 2, 21 and 22 and temperature class T6
- Wide temperature range from -36 °C to +50 °C
- High degree of protection IP 66 for harsh environments
- Large Ex-e terminal compartment for ease of installation

# Ordering details

LPL LED

## Ordering details

Type	Content	Lamp / illuminant	rated luminous flux of the luminaire <sup>1)</sup>	Weight	Metal thread	Screw plug	Order No.
<b>LPL LED</b>							
LPL06-C57-5L-LT	with mounting bracket	High power LED-module 53 W (scope of delivery)	5127 lm	17 kg	2 x M25	2 x M25	<b>CCL 121 4001 AE</b>
LPL06-C57-7L-LT	with mounting bracket	High power LED-module 70 W (scope of delivery)	6998 lm	17 kg	2 x M25	2 x M25	<b>CCL 121 4003 AE</b>
LPL06-C57-9L-LT	with mounting bracket	High power LED-module 87 W (scope of delivery)	8645 lm	17 kg	2 x M25	2 x M25	<b>CCL 121 4004 AE</b>
LPL06-C57-10L-LT	with mounting bracket	High power LED-module 105 W (scope of delivery)	10272 lm	17 kg	2 x M25	2 x M25	<b>CCL 121 4005 AE</b>



## Accessories



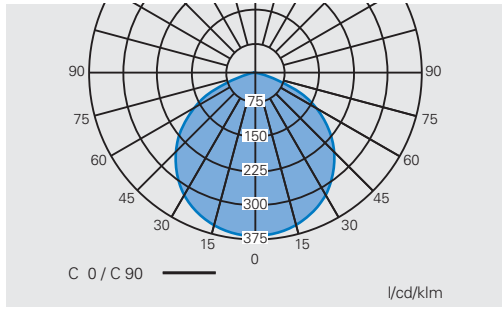
Type	Content	OU	Order No.
PMB	Pole mounting bracket with fixing screws for use with mounting bracket	1	<b>CCL 107 6003</b>

Scope of delivery without fixing accessories, if not stated otherwise.  
Metal cable glands see main catalogue part 2: 2.3.12 f

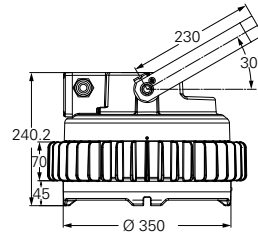
# Dimension drawing / Polar curve

LPL LED

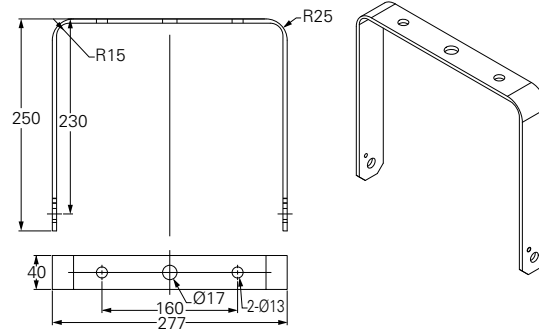
Polar curve LPL06-C57-5/7/9/10L



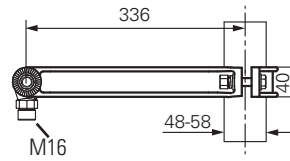
LPL06-C57-5/7/9/10L



Mounting bracket



Pole mounting bracket



Dimensions in mm





### Technical data

#### LPL06 LED

EC-Type Examination Certificate	ITS 14 ATEX 18105X
IECEX Certificate of Conformity	IECEX UL 15.0077X
Marking accd. to 94/9/EC	⊕ II 2 G Ex d e IIC T5/T6 Gb ⊕ II 2 D Ex tb IIIC T80°C/T95 °C Db IP66
Marking accd. IECEX	Ex d e IIC T5/T6 Gb Ex tb IIIC T80°C/T95 °C Db IP66
Permissible ambient temperature	-36 °C up to +55 °C / -36 °C up to +50 °C (LPL06-C57-10L)
Rated voltage	100 V - 277 V AC
Frequency	50 - 60 Hz
Fixture lifetime	50.000 h at $t_a = + 55 °C$
Power consumption	max. 105 W (see table luminaire data)
Power factor cos $\phi$	$\geq 0.9$
Circuit	Electronic driver
Protection class	I
Lamp name	High power LED-module <sup>1)</sup>
Light colour	5700 K cool white (CRI 70) / 3000 K (CRI 80) on request
Dimensions (L x W x H)	Ø 350 x 240 mm
Connecting terminals	3 x 0.5 mm <sup>2</sup> up to 4.0 mm <sup>2</sup> , max 6.0 mm <sup>2</sup> single wire
Enclosure colour	Grey
Enclosure material	Copper free aluminium
Weight	17 kg
Cable glands / gland plates / enclosure drilling	2 x M25 x 1.5 thread, 1 x with Ex-e screw plug <sup>2)</sup>
Type of mounting	Ceiling-/wall mounting
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	Toughened glass

<sup>1)</sup> ordering details

<sup>2)</sup> M20 on request

### Additional luminaire data

Type	Rated luminous flux of the luminaire	Rated power	Permissible ambient temperature	Temperature Class T <sub>a</sub> Gas	Temperature Class T °C Dust
<b>LPL06 LED</b>					
LPL06-C57-5L-LT	5127 lm	53 W	-36 °C up to + 55 °C	T6	T 80 °C
LPL06-C57-7L-LT	6998 lm	70 W	-36 °C up to + 55 °C	T6	T 80 °C
LPL06-C57-9L-LT	8645 lm	87 W	-36 °C up to + 55 °C	T6	T 80 °C
LPL06-C57-10L-LT	10272 lm	105 W	-36 °C up to + 50 °C	T5	T 95 °C

# Application: Chemical plant

LPL LED for nearly every application

The LPL LED is suitable for a wide range of hazardous areas, including applications in heavy industrial, chemical, petrochemical, oil and gas, pharmaceuticals, shipyards, dockyards, power generation, paper mills and wastewater treatment. The LPL LED comes with a standard U-shaped mounting bracket for ceiling and wall mounting. .

## Challenge

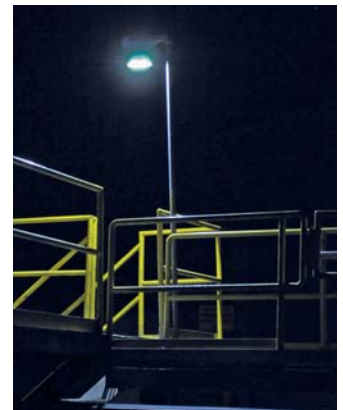
Robust and low-maintenance equipment with a maximum of durability is needed, even in difficult to access areas with increased load of environmental influences as moisture, dust, chemicals or mechanical influences like vibrations.

## Solution

The new LED-light fittings LPL LED fulfil this high requirement.

## Results

By using the robust series of LED light fittings the repair and maintenance cost can be reduced significantly.





# Application: Fire fighting boat

LPL LED ensures safe lighting on a fire fighting boat

The Mannheimer Fire Department's 'Metropolregion' fire-fighting boat is one of the most modern, well-equipped fire-fighting boats in Europe. On the boat, mixed teams made up of members of the Mannheim and ColdFusion fire brigades and the BASF plant's fire brigade, can be called into action. The boat covers a very wide area of the Rhine, from Germersheim to Worms, the Neckar all the way to the Neckargmuend lock.

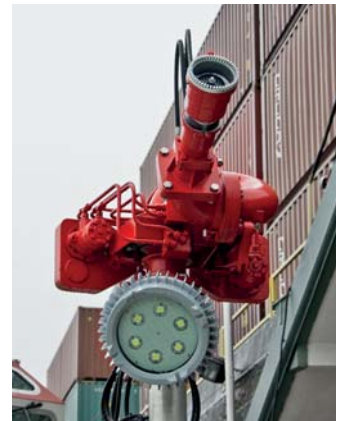
## Challenge

The electrical equipment and lighting on the boat must withstand the harshest of conditions, including the release of chemicals, flammables and explosive substances, or oil spills. With the constant risk of an explosive atmosphere, the safety of the crew and fire-fighting teams must be respected at all times.

All lighting must be protected to at least IP65, in order to withstand the constant exposure to moisture and splash water. In addition, the lighting needs to be robust and insensitive to shock and vibration that occur when the boat is operating. LED-driven lighting is particularly suitable for such harsh conditions, as they are shock-resistant and have no filament or glass bulb.

## Product

For illumination of work areas on the fore and aft deck for the two foam-/water-cannon and the three loading cranes, Explosion-proof LPL LED spotlights are installed. These powerful spotlights are highly protected to IP66 and have a light output equivalent to that of a 250W high-pressure discharge lamp.





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