



it's cool to be safe
explosion proof solution for the global market



Supermec
explosion proof electrical equipment





LLE / LLEE -P

LLE / LLEE -P series LED linear light fittings are normally used in the chemical and petrochemical plants, off-shore platforms, refineries and any other industry where hazardous atmospheres (gas and combustible dust) are potentially present.

The LLE / LLEE -P range has been designed to meet the main requirements of illumination of working areas and to grant a safely evacuation of the plant in case of black-outs.



Function

The LLE -P series are used for the standard illumination while LLEE -P series are proposed with function “normal + emergency” in order to grant a sufficient illumination to leave the area in case of temporary black-out. The wiring diagram of LLEE -P series is designed to provide a continuous power supply to the emergency unit to grant its full functionality anytime. Besides a LED unit, well visible from outside, indicates the status of emergency unit through green/yellow/red colours to facilitate the maintenance activity.

The internal wiring is designed to allow any combination of loop-in loop-out installation.

The light fitting can be installed using different mounting types as described in dedicated section of this catalogue.

Construction

The materials used to manufacture the LLE / LLEE -P series have been studied to grant the maximum protection against the highly corrosive agents present in these industries:

- the body in glass fiber reinforced polyester (GRP), provides a very high mechanical strength together with a good resistance against the UV ray effects;
- the transparent diffuser in UV ray resistance polycarbonate has a self-extinguishing property according to Standard UL 94;
- the gasket on cover grants an IP66 protection level ;
- the closing system in one single spot, apart from facilitating greatly the maintenance operations, is itself a guarantee of first-rate holding system since it provides a constant pressure of seals over all the perimeter of the diffuser ;
- the internal electrical components are fully sealed to prevent any corrosive action that could cause electrical faults;
- the body has two cable entries M25x1.5 on one side and one cable entry M25x1.5 on the opposite side so to allow any loop-in loop-out installation. On request it's possible to have two cable entries M25x1.5 on both sides;
- all the light fittings are equipped, as standard, with one cable gland and two stopping plugs in polyamide, ATEX/IECEx certified. Other materials or combinations are available as option;
- the LED modules are fixed on internal frame and are available with or without diffuser; the diffuser is anyway available as option;
- electronic ballast, equipped with some self-protective functions, works with a multirange voltage and has a two-supply circuit design so to continue to energize one LED module in case the second one is faulty;
- internal circuit is protected by fuses so to minimize any possible problems caused by over-voltage during normal operation;



Supermec, always pays special attention to local problems inside the plants.

For installation in tropical environments, LLE -P Series can be provided with breather to avoid water condensation that, mixed with chemical agents, is the first cause of corrosion of electrical components inside the enclosures.

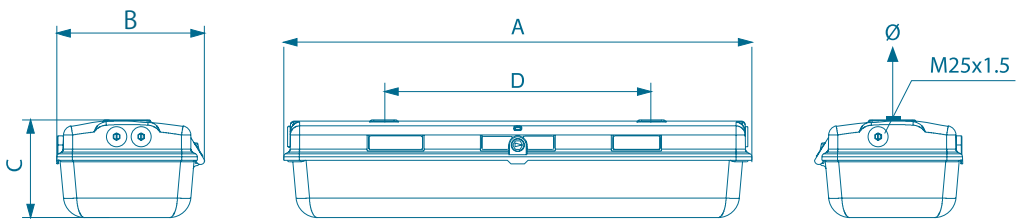
Protection

certificate number:	IECEx CML 17.0087X CML 17 ATEX 1171X
marking:	⊕ II 2GD Ex db eb mb op is q IIC T4/T5 Gb Ex tb op is IIIC T80°C Db
ambient temperature:	-25°C +40°C -25°C +55°C
degree of protection:	IP66
conformity:	Directive ATEX 2014/34/EU
standards:	IEC-EN60079-0 / IEC-EN60079-1 / IEC-EN60079-5 / IEC-EN60079-7 IEC-EN60079-18 / IEC-EN60079-28 / IEC-EN60079-31
category:	suitable for Zone 1 – 2 (gas) and Zone 21 – 22 (dust)



LLE -P Explosion proof LED Light Fitting

code	overall dimensions and weight				fixing dimensions		electrical data		
	A	B	C	kg	D	ø	LED module	power	voltage
LLE 130P	698	222	145	4.8	400	M8	without diffuser	1 x 30 W	AC 100-250V 50/60Hz.
LLE 230P	1310	222	145	7.7	800	M8	without diffuser	2 x 30 W	AC 100-250V 50/60Hz.
LLE 130PD	698	222	145	4.8	400	M8	with diffuser	1 x 30 W	AC 100-250V 50/60Hz.
LLE 230PD	1310	222	145	7.7	800	M8	with diffuser	2 x 30 W	AC 100-250V 50/60Hz.

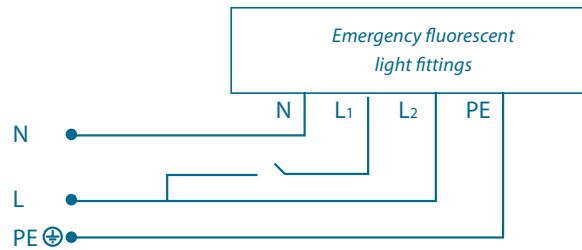
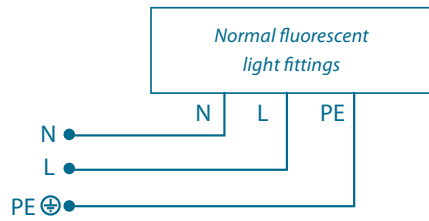


LFEE -P Explosion proof Emergency LED Light Fitting

code	overall dimensions and weight				fixing dimensions		electrical data		
	A	B	C	kg	D	ø	power normal	power emergency	emergency time
LLEE 130P	698	222	145	6.6	400	M8	1 x 30W	1 x 10 W	120 minutes
LLEE 230P	1310	222	145	9.7	800	M8	2 x 30 W	2 x 10 W	120 minutes
LLEE 130PD	698	222	145	6.6	400	M8	1 x 30W	1 x 10 W	120 minutes
LLEE 230PD	1310	222	145	9.7	800	M8	2 x 30 W	2 x 10 W	120 minutes

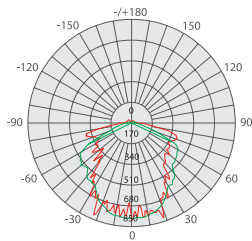
Note: the codes with final "PD" indicated that LED module is including the diffuser

Wiring Diagrams



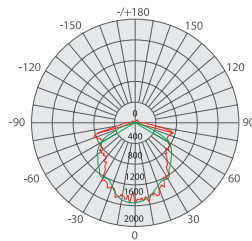
Polar Diagrams

without diffuser



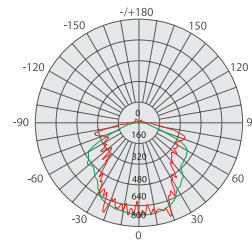
The average beam angle (50%) : 112.2°

LLE 130P



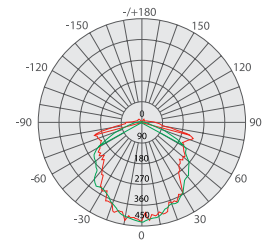
The average beam angle (50%) : 133.5°

LLE 230P



The average beam angle (50%) : 123.0°

LLEE 130P

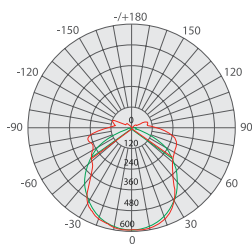


The average beam angle (50%) : 134.8°

LLEE 230P

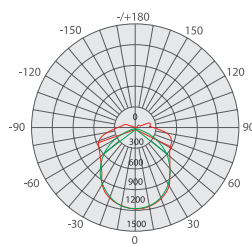
— CO/180
— C90/270

with diffuser



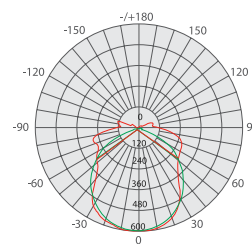
The average beam angle (50%) : 108.9°

LLE 130PD



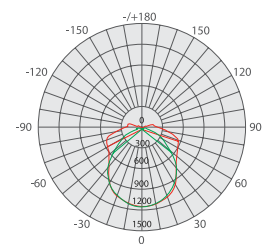
The average beam angle (50%) : 118.5°

LLE 230PD



The average beam angle (50%) : 108.9°

LLEE 130PD



The average beam angle (50%) : 117.8°

LLEE 230PD

— CO/180
— C90/270

