

# MBL160-Ex

Subsidiary LED lantern

3 NM | 1 level

5 NM | 2 levels



## Excellent optical efficiency

The MBL160-Ex is a LED marine flashing lantern of short and medium range, with a great optical efficiency and low consumption, fitted with LED diodes of high intensity, reaching a maximum range of 5 nautical miles.

## FEATURES

- Classification:  
GROUP II: Equipment on surface (no mining).  
ZONE 1: Category 2.  
ATMOSPHERE: GAS.
- High-efficiency luminous system.
- 3-5 nm (T=0.74).
- Vertical divergence 5°.
- Main lantern white and Morse code "U". Other rythms and colours available under request.
- 360° horizontal output.
- Average operation lifetime over 10 years.
- Internal photocell adjustable in lux.
- IP 68 watertightness degree (immersion resistant).
- Linear adjustment of luminous intensity.
- RS-232 serial port for setting adjustments by PC.
- Short-circuit, reverse-polarity and transient over-voltage protections.
- Patented optical system®.
- Synchronisation by cable.



Its luminous source consists of an innovating lens system especially designed to take the maximum profit of LED diodes, thus obtaining an output of up to 180 Cd/W.

This lantern belongs to the ATEX / IECEx Classification Group II, Category 2 assuring a high protection level. This allows the use of this lantern in potentially explosive atmospheres, classified for Zone 1 and Zone 2.

**Designed according to IALA Recommendation G-1162.**

**Ex-II 2G Ex eb mb ib IIC T4 Gb.**

# MBL160-Ex

## Subsidiary LED lantern

### Optical System

<b>Light source:</b>	3 to 6 nos. ultra-bright LED diodes, with high-precision acrylic lens.
<b>Luminous range:</b>	3-5 nm (T=0.74).
<b>Colours available:</b>	White, green, red and amber.
<b>Vertical divergence:</b>	5° (50% Io).
<b>LED average life:</b>	More than 100,000 hours.
<b>Power supply:</b>	12 V dc.
<b>Power consumption:</b>	Approx. 0.78-1.56 W average during operation at specified flash character.
<b>Idle current:</b>	3 mA.

### MF14-Ex Electronic Flasher

Circuit based on microprocessor.	Short-circuit protection.
256 flash characters, (6 nos. user selectable).	Reverse-polarity and transient overvoltage protections.
Internal photocell.	RS-232 serial port for setting adjustments by PC.
Adjustable day/night threshold between 10 and 400 lux.	LED diode failure detection.
Integrated temperature sensor.	

### Materials and environment

<b>Temperature range:</b>	From -20° to +60°.
<b>Lantern:</b>	L5754 aluminium.
<b>Lens cover:</b>	Acrylic, UV stabilised.
<b>Dimensions (L x W x H):</b>	1 level: 230 x 230 x 358 mm 2 level: 230 x 230 x 413 mm
<b>Weight:</b>	6.5 kg.
<b>Watertightness degree:</b>	IP 68.
<b>Humidity resistance:</b>	100%. Pressure-compensation valve to avoid condensation.
<b>Fixings:</b>	3 - 4 bolts in a 200mm diameter.

### Standards and Certifications

Gas: II 2G Ex eb mb ib IIC T4 Gb
Group II: Equipment in surface (no mining).
Zone 1: Category 2.
General requirements: EN 60079-0 Standard.
Equipment protection by Increased Safety: "eb", EN 60079-7 Standard.
Equipment protection by Encapsulation: "mb", EN 60079-18 Standard.
Equipment protection by Intrinsic Safety: "ib", EN 60079-11 Standard.
Temperature Class: T4. 135°C.
Protection against Gas: (G).
ATEX Certification n°: LOM 13ATEX2055 X

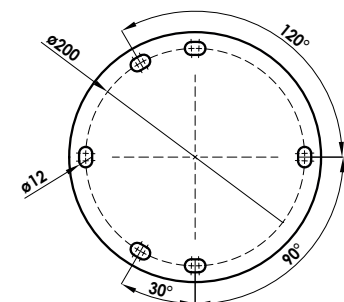
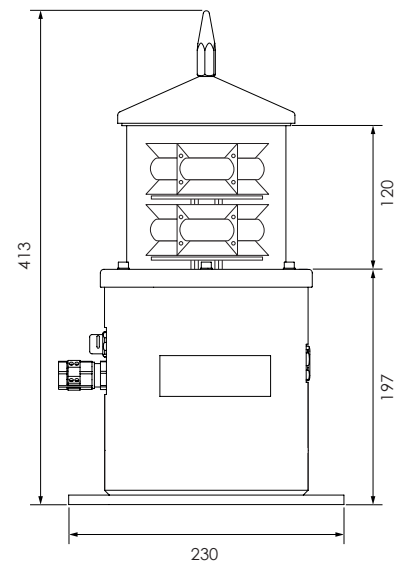
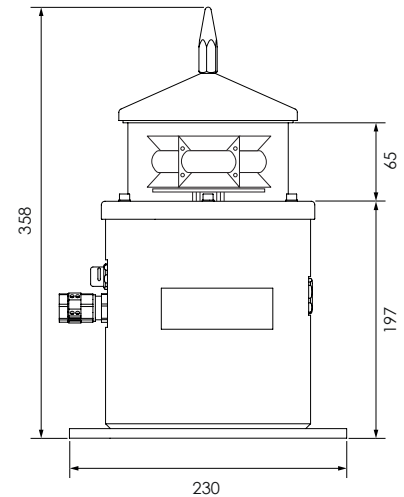
### Vertical divergence 5° peak intensities (Cd)

Colour	Vertical divergence 5°	
	6W	12W
White	537	1,010
Green	439	681
Red	380	590
Amber	564	662

### Options

Polyamide version for Zone 2: **II 3G Ex nA mc II T5.**

! Specifications subject to change without previous notice.



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