



# LED MARINE LANTERN

# MBL 160



The MBL 160 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 16 nautical miles.

Ideal for temporary and/or permanent beaconing of off-shore wind farms or platforms.

This lantern is ready to integrate a monitoring and a synchronising system based on bus topology.

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. Manufactured with high-quality and resistant materials, the MBL 160 provides a long service life under harsh marine conditions.

Designed according to IALA Recommendations.

## FEATURES

- ✓ High-efficiency luminous system.  
Up to 11 nm (T=0.74), 16 nm (T=0.85).
- ✓ Vertical divergence up to 30°.
- ✓ 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.
- ✓ Double RS-232 serial port for setting adjustments by PC and remote monitoring system.
- ✓ Programming, configuration and operating status via PC, IR programmer or Bluetooth.
- ✓ Ready to integrate remote monitoring via GSM, VHF or satellite, synchronization via GPS or AIS AtoN module.
- ✓ Short-circuit, reverse-polarity and transient over-voltage protections.
- ✓ **PATENTED OPTICAL SYSTEM.**

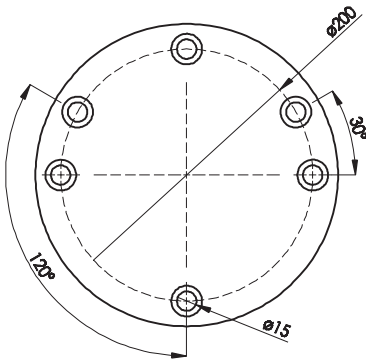
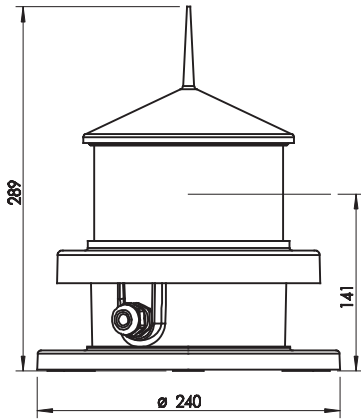


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Specifications subject to change without previous notice.



### Options

- Infrared (IR) programmer.
- PC programming kit.
- RS-485 MODBUS serial port.
- Marine aluminium base.
- Other specifications available under request.
- MBL 160-HD (up to 30° divergence).
- MBL 160-SYNC (GPS synchronisation).
- MBL 160-TG (GSM remote monitoring).
- MBL 160-TR (Radio remote monitoring).
- MBL 160-TS (Satellite remote monitoring).
- MBL 160-AIS (AIS AtoN).

### Optical System

Light source:	3 to 12 nos. ultra-bright LED diodes, with high-precision acrylic lens.
Luminous range:	Up to 11 nm (T=0.74) 16 nm (T=0.85).
Colours available:	White, green, red, amber and blue.
Vertical divergence:	From 5° to 30° (50% lo).
LED average life:	More than 100,000 hours.
Power supply:	From 9 to 36V.
Lantern consumption:	From 3 to 24W.
Idle current:	2 mA.

### Electronic control

Flash rhythms:	256 (6 nos. user selectable).
Day/night threshold:	Adjustable between 10 and 400 lux.
Solar charge regulation function:	Regulation in 3 phases.
Settings:	PC / IR programmer / Bluetooth.
Luminous intensity adjustment:	Linear, between 10 and 100%.
Light intensity reduction due to low battery:	Configurable by the user.

### Materials and environment

Base:	Glass-fibre reinforced polyamide PA66-GF30.
Lens cover:	Acrylic, UV stabilised.
Vibration resistance:	MIL-STD-202G, Method 204D (5G).
Shock resistance:	MIL-STD-202G, Method 213B.
Watertightness degree:	IP 68.
Fixings:	3 - 4 bolts in a 200mm diameter.
Humidity resistance:	100%. Pressure-compensation valve to avoid condensation.
Temperature range:	From -30° to 70°C.

MBL 160	PEAK INTENSITIES (Cd)							
	VERTICAL DIVERGENCE 5°				VERTICAL DIVERGENCE 12°			
COLOUR	6W	12W	18W	24W	6W	12W	18W	24W
White	537	1,010	1,515	2,020	338	676	1,014	1,352
Green	439	681	1,022	1,362	290	580	870	1,160
Red	380	590	895	1,180	204	408	612	816
Amber	564	662	993	1,324	235	470	705	940

Other divergences available.



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