Mediterráneo Señales Marítimas

LED SECTOR LIGHT

MBL 400-S

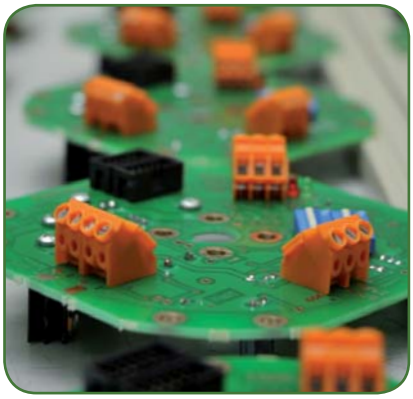
The MBL 400-S is a medium-range LED sector light, with a great optical efficiency, providing sectored light beams with an accuracy of up to 0.5º. Its luminous source consists of high-intensity LED diodes, obtaining a range of up to 12 nautical miles. Intended to be placed in on-shore aids-to-navigation locations, such as poles and towers, as well as hard-to-reach sites or under extreme environmental conditions.

Its optical system utilises the point light source of the lens to make an effective sectorisation in each case. Every sector requires an individual light level, which enables practically any sector configuration.
Levels are superimposed and protected by a shock-resistant glass lens cover. Thus, each beacon is personalized as considering the required range, colours and angles of sector.

Designed according to IALA Recommendations.

FEATURES

- √ State-of-the-art LED technology.
- √ High-efficiency luminous system.
  Up to 12 nm (T =0.74), 18 nm (T=0.85).
- √ Vertical divergence up to 5º (50%Io).
- √ Inner sectorised lampshade made from aluminium, laser machining.
- √ Field-diaphragm sectorisation, made to measure for each case.
- √ Average operation lifetime over 15 years.
- √ IP 67 watertightness degree (immersion resistant).
- √ Programming, configuration and operating status via PC and Bluetooth, or IR programmer as an option.
- √ Short-circuit, reverse-polarity and transient over-voltage protections.
- √ High shock resistance.
- √ Anti-humidity device to avoid condensation.
- √ **PATENTED OPTICAL SYSTEM.**



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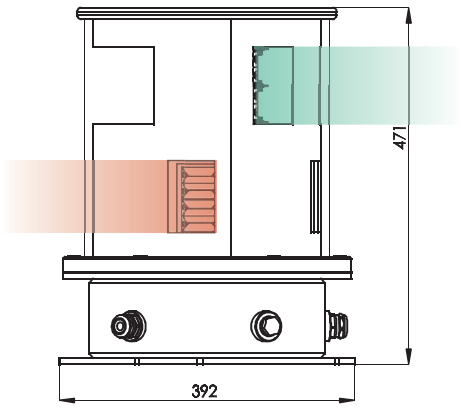
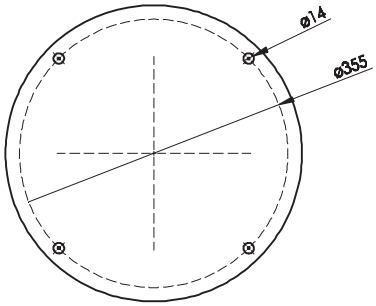
Specifications subject to change without previous notice.





Example of sector distribution.

Optical System	
Light source:	Ultra-bright LED diodes, with high-precision acrylic lens.
Luminous range:	From 2 to 12 nm (T=0.74) 18 nm (T=0.85).
Colours available:	White, green, red, amber and blue.
Vertical divergence:	Up to 5º (50% Io).
LED average life:	More than 100,000 hours.
Power supply:	From 9 to 36V.
Lantern consumption:	From 6 to 70W.

Electronic control	
Flash rhythms:	256 (6 nos. user selectable).
Day/night threshold:	Adjustable between 10 and 400 lux.
Settings:	PC / Bluetooth (optional IR programmer).
Luminous intensity adjustment:	Linear, between 10 and 100%.
Light intensity reduction due to low battery:	Configurable by the user.

Materials and environment	
Lantern:	Marine aluminium, with polyurethane finishing.
Lampshade:	Anodised aluminium.
Lens:	Acrylic, UV stabilised.
Lens cover:	Tempered glass.
Shock resistance:	MIL-STD-202G, Method 213B.
Watertightness degree:	IP 67.
Fixings:	4 bolts in a 355mm diameter.
Humidity resistance:	100%. Pressure-compensation valve to avoid condensation.
Temperature range:	From -30º to 70ºC.
Inside hardware:	Stainless steel.

Luminous intensities

A minimum intensity of 550 Cd per level (white) is obtained, so that the beacon intensity will depend on sector width and configuration needed. Each case is studied and optimized individually.

Options
Infrared (IR) programmer.
PC programming kit.
RS-485 MODBUS serial port.
Other specifications available under request.
MBL 400-S-SYNC (GPS synchronisation).
MBL 400-S-TG (GSM remote monitoring).
MBL 400-S-TR (Radio remote monitoring).
MBL 400-S-TS (Satellite remote monitoring).
MBL 400-S-AIS (AIS AtoN).

MBL 400-S		ORIENTATIVE LUMINOUS INTENSITIES (Cd) PER LEVEL			
Levels	Power	White	Green	Red	Amber
1	2W	550	400	225	235
2	4W	1,100	800	450	470
3	6W	1,650	1,200	675	700
4	8W	2,200	1,600	900	940
5	10W	2,950	2,000	1,125	1,175

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