



OPTIONAL

## MDL

### Long-range LED leading lights

The MDL are long-range LED leading lights, especially designed to mark port approaching and entrance channels. They are normally used in traditional leading stations of two lights, in both day and night modes.

### State-of-the-art design lens

The MDL light produces an unidirectional beam with a horizontal divergence of  $10^\circ$ . Its luminous source, consisting of high-power LEDs of 100,000 hours average life, makes it a maintenance-free beacon.

### Long service life

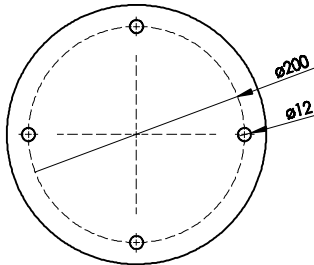
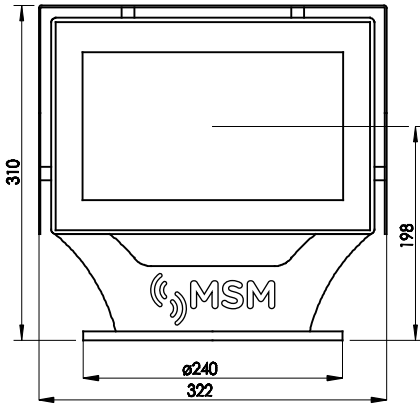
Manufactured with high quality and resistant materials, the MDL provides a long service life under severe marine conditions.

This lantern strictly complies with IALA Recommendations.



## FEATURES

- *State-of-the-art LED technology.*
- *Day range up to 4 nm.*
- *Nominal night range up to 21 nm ( $T=0.74$ ).*
- *Maximum total LED power: 27 W.*
- *Horizontal divergence of  $10^\circ$  ( $50\% I_0$ ), other divergences available under request.*
- *Vertical divergence up to  $2^\circ$  ( $50\% I_0$ ).*
- *High-accuracy optical system, stabilised against vibrations.*
- *Average operation lifetime over 25 years.*
- *Stainless-steel housing with outer polyurethane finish.*
- *Rectangular, high-resistance glass lens cover.*
- *100% humidity resistant.*
- *Double RS-232 serial port for setting adjustments by PC and remote monitoring system.*
- *Maintenance free.*



## Optical system

|                               |   |
|-------------------------------|---|
| <b>Light source:</b>          | Up to 9 nos. high-intensity LED diodes. |
| <b>Lens:</b>                  | Collimator, a lens for each LED.        |
| <b>Day range:</b>             | Up to 4 nm.                             |
| <b>Nominal night range:</b>   | Up to 21 nm (T=0.74).                   |
| <b>Horizontal divergence:</b> | Up to 10° (50% I <sub>0</sub> ).        |
| <b>Vertical divergence:</b>   | Up to 2° (50% I <sub>0</sub> ).         |
| <b>Power supply:</b>          | Up to 27 W.                             |
| <b>LED average life:</b>      | More than 100,000 hours.                |

## External electronic control unit

|                             |                                    |
|-----------------------------|------------------------------------|
| <b>Flash rhythms:</b>       | 256 (6 nos. user selectable).      |
| <b>Circuit:</b>             | Microprocessor controlled.         |
| <b>Settings:</b>            | By microswitches or PC.            |
| <b>Input voltage:</b>       | From 9 to 36 V c.c.                |
| <b>Day/night threshold:</b> | Adjustable between 10 and 400 lux. |
| <b>Power supply:</b>        | Individual for each LED.           |

Automatic & programmable luminous intensity reduction at night.  
Reverse-polarity, short-circuit, over-temperature and transient overvoltage protections.

## Materials and environment

|                               |  |
|-------------------------------|--|
| <b>Housing:</b>               | Stainless-steel, with polyurethane finish.               |
| <b>Lens cover</b>             | Rectangular, high-resistance glass.                      |
| <b>Watertightness degree:</b> | IP 67.   |
| <b>Humidity resistance:</b>   | 100%. Pressure-compensation valve to avoid condensation. |
| <b>Temperature range:</b>     | From -30° to 70°C.                                       |
| <b>Fixings:</b>               | 4 nos. M10 bolts in a 200 mm diameter.                   |

All internal components are assembled on a base plate.  
Easy adjustment and levelling

## Options

Synchronization by cable or GPS receiver.  
Remote monitoring module via GSM, radio or satellite.  
RS-485 MODBUS serial port.  
Higher horizontal divergences available under request.

## Peak intensities (Cd)

| Model | Power |         |         |        |
|-------|-------|---------|---------|--------|
| MDL9  | 27 W  | 189,000 | 133,200 | 94,500 |

**!** Specifications subject to change without previous notice.