MCL 160

The MCL 160 is a compact LED marine lantern, solar self-contained, with great optical efficiency and low consumption, fitted with LED diodes of high intensity, reaching a maximum range of 8 nautical miles and offering a big autonomy.

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.

The battery is replaceable, thus the complete lantern disposal is not necessary at the end of battery’s life. Standard fixings allow for a quick beacon replacement.

Designed according to IALA Recommendations.

Features:

- High-efficiency luminous system.
  Up to 6 nm (T=0.74), 8 nm (T=0.85).
- Vertical divergence up to 12°.
- 360° horizontal output.
- Average operation lifetime over 10 years.
- All components can be easily replaced.
- IP 68 watertightness degree (immersion resistant).
- High shock resistance.
- Anti-humidity device in order to avoid condensation.
- Autonomy without solar charging up to 300 hours.
- Automatic energy management, according to latitude.
- Programming, configuration and operating status via PC, IR programmer or Bluetooth as an option.
- Optional GPS synchronization.
- PATENTED OPTICAL SYSTEM.
LED Compact Beacons

MCL160

Optical System
- **Light source:** 3 to 6 nos. ultra-bright LED diodes, with high-precision acrylic lens.
- **Luminous range:** Up to 6 nm (T=0.74) 8 nm (T=0.85).
- **Colours available:** White, green, red, amber and blue.
- **Vertical divergence:** From 5° to 12° (50% Io).
- **LED average life:** More than 100,000 hours.

Electronic control
- **Flash rhythms:** 256 (6 nos. user selectable).
- **Day/night threshold:** Adjustable in lux.
- **Solar charge regulation function:** Regulation in 3 phases.
- **Settings:** PC / IR programmer (optional Bluetooth).
- **Energy management:** Dynamic, according to latitude.
- **Light intensity reduction due to low battery:** Configurable by the user.

Solar module and battery
- **Solar module:** 1 no. of 2.5W.
- **Battery:** 12 Ah, gelled, maintenance-free.
- **Autonomy without solar charging:** Up to 300 hours.

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 -20º to 70ºC.
- **Inside hardware:** Stainless steel.

Peak intensities (Cd)

<table>
<thead>
<tr>
<th>Colour</th>
<th>Vertical divergence 5°</th>
<th>Vertical divergence 12°</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>169</td>
<td>97</td>
</tr>
<tr>
<td>Green</td>
<td>166</td>
<td>109</td>
</tr>
<tr>
<td>Red</td>
<td>120</td>
<td>70</td>
</tr>
<tr>
<td>Amber</td>
<td>176</td>
<td>73</td>
</tr>
</tbody>
</table>

Other divergences available.

Options
- Infrared (IR) programmer.
- PC programming kit.
- Bluetooth programming.
- Bird spikes.
- Other specifications available under request.
- MCL 160-SYNC (GPS synchronization).
- MCL 160-TG (GSM remote monitoring).
- MCL 160-TR (Radio remote monitoring).