360 system

4 - 11 NM

PC | BT | IR | GPS | PWR | UHF | GSM | SAT | AIS

OPTIONAL

MCL360

High energy efficiency

The new **MCL360** LED compact lantern is one of the latest innovations developed by MSM to provide the highest energy efficiency with the most advanced technology. This lantern is the ideal equipment for on- and off-shore beaconing applications with the most energy demanding conditions thanks to the high power of its solar array and the large battery capacity.

Modular design

The MCL360 has a **modular design** available in 3 sizes. The range has different battery and solar charge capacities as well as different light ranges to adapt to the user's requirements. The enhanced optics gives greater light efficiency, covering a wide spectrum of ranges: from 4 to **11 real NM**, depending on the model.

Multiple remote control options

This lantern can integrate different monitoring and remote control options such as communication via GSM, UHF, satellite and AIS. The Global Netcom software developed by MSM is the ideal complement to monitor and remotely control the operating status of the lantern.

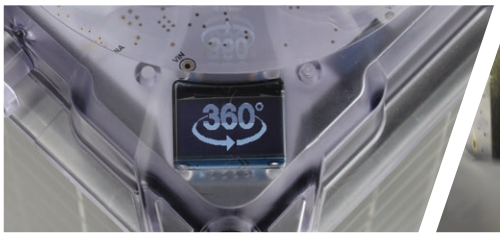
MCL360-L *MCL360-M* *MCL360-S Plus* *MCL360-S*

FEATURES

- *High-efficiency luminous system. Up to 11 real nm (T=0.74).*
- *Vertical divergence up to 10° (50%I_0).*
- *360° horizontal output.*
- *Average operation lifetime over 10 years.*
- *Ideal self-contained lantern for energy demanding applications.*
- *IP 68 watertightness degree (immersion resistant).*
- *Programming, configuration and operating status via PC, Bluetooth or IR programmer.*
- *Ready to integrate remote monitoring via GSM, UHF, satellite, or AIS AtoN.*
- *GPS synchronization module included as standard.*
- *Autonomy without solar charging up to 700 hours (depending on the model).*
- *RS-232 serial port for setting adjustments by PC.*
- *Designed according to IALA Recommendations.*

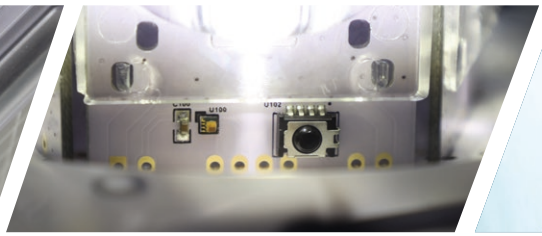
MCL360

360 system



Display

An integrated OLED screen displays information about the operating status of the lantern.



Double on/off control

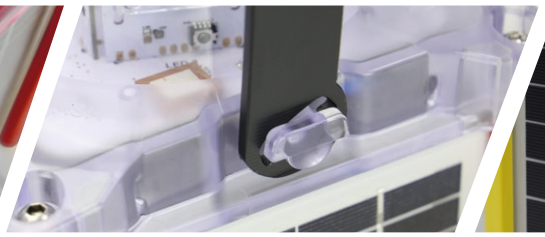
The lantern can be switched on and off via the photocell integrated in the optic assembly and with an internal astronomical clock, increasing the reliability.

Smartcom360

Configuration software available for PC or mobile devices.

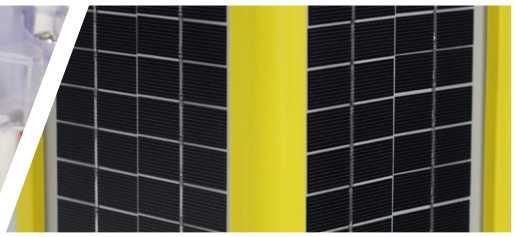
LED colour indicator

The corner pieces of the structure indicate the color of the light.



Easily removable transport handle

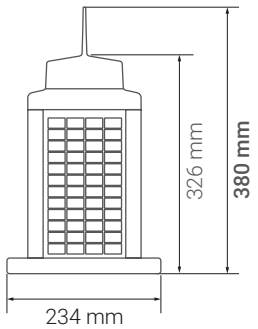
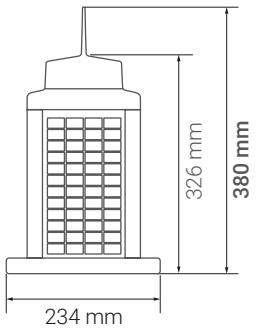
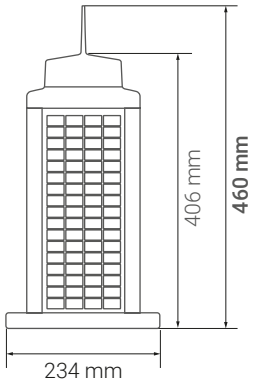
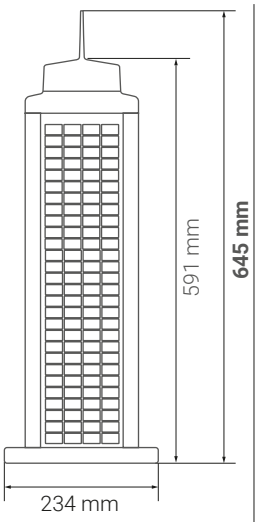
The transport handle is removable, preventing shades' projection on the solar modules.



Solar modules

Four high-performance monocrystalline solar modules cover the entire lateral surface of the lantern to optimize energy collection.

Dimensions

MCL360-S	MCL360-S Plus	MCL360-M	MCL360-L
			
Up to 8 NM	**Up to 8 NM**	**Up to 9 NM**	**Up to 11 NM**
Solar module 3.7 W x 4 nos. = 14.8 W	**Solar module** 3.7 W x 4 nos. = 14.8 W	**Solar module** 5.3 W x 4 nos. = 21.2 W	**Solar module** 9.1 W x 4 nos. = 36.4 W
Battery 4.8 Ah / 12 V	**Battery** 16.9 Ah / 12 V	**Battery** 16.9 Ah / 12 V	**Battery** 33.8 Ah / 12 V
Autonomy without solar charging up to 200 hours	**Autonomy without solar charging** up to 700 hours	**Autonomy without solar charging** up to 350 hours	**Autonomy without solar charging** up to 500 hours

MSM

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CE SGS SGS SGS IALA

MCL360

360 system

Technical features

Light source:	Ultra-bright LED diodes, with high-precision acrylic lenses.
LED average life:	More than 100,000 hours.
Flash rhythms:	256 rhythms (6 nos. user selectable).
Vertical divergence:	5º, 8º and 10º.
Battery:	Lead Crystal®, or Lithium as an option. Maintenance-free.
On/Off Switch:	External battery switch
Lens cover:	UV stabilised Polycarbonate. Integrated bird spike.
Chasis:	Anodised marine aluminium.
Base:	Polycarbonate.
Fixings:	Standard (4 - 3 bolts in a 200 mm diameter).
Watertightness degree:	IP 68.

Options

Remote control: GSM, Radio, satellite and/or AIS.

AIS Type 1 or Type 3.

RS-232, RS-422 , RS-485 additional serial port or Modbus.

Redundant remote control system.

Charging port.

Vertical divergence up to 15º.

Impact sensor.

Tool kit.

Spare parts kit.

Fixing screws kit.

Other fixings available.

Other bird deterrent systems.

Other specifications available under request.

Possibility of incorporating a Powerbank.

SMARTCOM360: Configuration software

SMARTCOM360 is a software **designed to facilitate the lantern configuration process**, analysing the optical and energy performance.

This software automatically performs feasibility calculations, considering the features of the lantern (colour, divergence, energy capacity ...) and the user-editable parameters (range, flash characteristic, solar radiation ...). This not only validates the user configuration, but also proposes the best solution for each case.

An improvement which makes SMARTCOM360 an excellent solution to set the maximum number of parameters for ensuring optimal performance.

Main user-configurable parameters:

- Light/intensity range in nautical miles/candelas.
- Flash characteristics.
- Operating mode (night, night and day or emergency lantern).
- Switch on control and hibernation control by calendar.
- GPS synchronization and positioning.
- Communications system, remote monitoring and control.
- Test mode.

Software available for PC and mobile devices.

Specifications subject to change without previous notice.
Luminous ranges will be affected depending on latitude, flash rhythms and chosen options.

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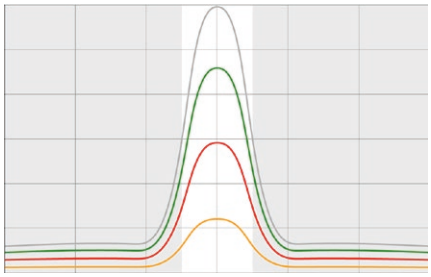
MCL360

360 system

Peak intensities (Cd)

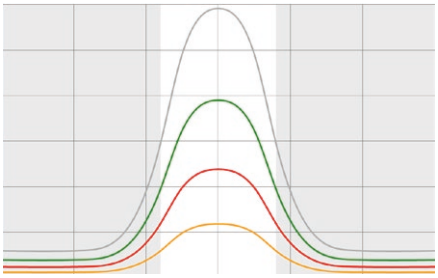
MCL360-L | Up to **11 NM**

DIVERGENCE 5º



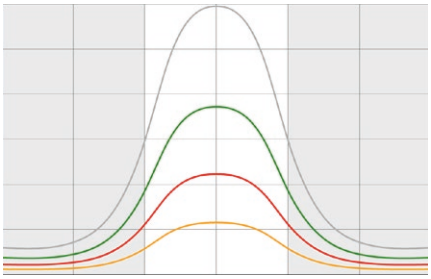
2087 Cd | 423 Cd
1607 Cd | 1021 Cd

DIVERGENCE 8º



1567 Cd | 313 Cd
1033 Cd | 631 Cd

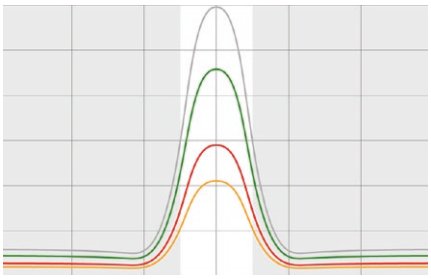
DIVERGENCE 10º



1411 Cd | 273 Cd
882 Cd | 528 Cd

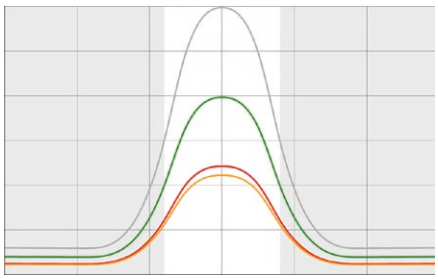
MCL360-M | Up to **9 NM**

DIVERGENCE 5º



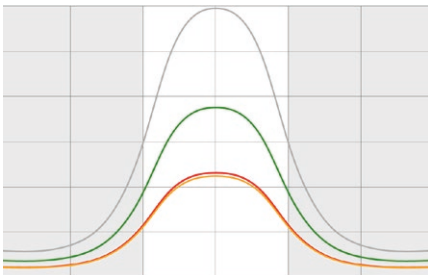
1060 Cd | 376 Cd
815 Cd | 517 Cd

DIVERGENCE 8º



747 Cd | 278 Cd
496 Cd | 303 Cd

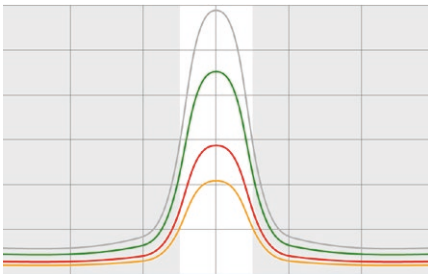
DIVERGENCE 10º



643 Cd | 242 Cd
406 Cd | 243 Cd

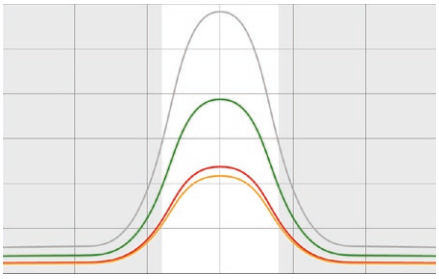
MCL360-S & MCL360-Plus | Up to **8 NM**

DIVERGENCE 5º



530 Cd | 188 Cd
407 Cd | 259 Cd

DIVERGENCE 8º



373 Cd | 139 Cd
248 Cd | 152 Cd

DIVERGENCE 10º

321 Cd | 121 Cd
203 Cd | 122 Cd

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