

# SM-2

## SOLAR POWERED LED MARINE LANTERN with range up to 2 NM /3.7 km/

*THE SM-2 MARKING LANTERN IS A LED LIGHTING SOURCE.  
IT IS DESIGNED FOR MARKING AS FOLLOWS:*

- SMALL SAFETY/HAZARD BUOYS;
- SHORT RANGE NAVIGATION BUOYS;
- RESEARCH BUOYS;
- PRIVATE AIDS FOR NAVIGATION;
- PORT AND MARINA ENTRANCES;
- CANAL MARKERS;
- OFFSHORE OIL AND GAS RIGS;
- PUBLIC PIERS, DOCKS AND MARINE WALKWAYS;
- BOAT AND BARGE TERMINALS;
- BREAKWATERS AND ALL TYPES OF MARINE AND RIVER INFRASTRUCTURE;
- FLOATING MARKERS.

*THE LANTERN IS EXCEPTIONALLY COMPACT. IT CAN BE INSTALLED WITHIN MINUTES WITHOUT ANY ADDITIONAL EQUIPMENT AND EXTERNAL POWER SUPPLY.*

*THE CORPUS IS RESISTANT TO DIFFERENT ATMOSPHERIC INFLUENCES AND IT IS FULLY HERMETIC.*

*SM-2 CAN OPERATE IN CONSTANT LUMINOUS MODE AS WELL AS IN DIFFERENT PRELIMINARY SPECIFIED FLASHING MODES. THE DIFFERENT OPERATING MODES CAN BE SET UP BY A REMOTE CONTROL.*

*A SPECIALIZED MAINTENANCE IS NOT REQUIRED.*



# SM-2

## MAIN CHARACTERISTICS

### For the device

Luminous modes	flashing	constant
Autonomous operation	300 hrs	150 hrs
Necessary number of solar hours for minimal autonomous operation	1.5 hrs	3 hrs
Latitude	55° S to 55° N	
Luminous level	on 70 Lux off 100 Lux	
Approx life time	5 years	
Operating mode	no maintenance, autonomous	
Operating temperature	- 40° C to 80° C	
IP degree / watertight/	IP 67 /NEMA 6/	
Control mode	Intelligent controller	
Overall dimensions	H = 125 mm / Ø = 178 mm	
Weight	1.89 kg	

### For the lamp

Emitted light colours:	green	red	amber	white
Nominal night visibility for the relevant colour in nautical miles:	~2.7	~2.3	~2.1	~2.5
Luminous Intensity for the relevant colour in candels:	~11	~7	~6	~9
Vertical divergence	~7°			
Horizontal divergence	360°			
Flashing modes	255 /standard flash patterns/			
Chromatic of the colour emitting	covers IALA specifications			
Approx life time	100 000 hours			

### For the solar panel

Type	monocrystalline type, potted with UV protected polyurethanes and domed for higher efficiency
Maximal power	1.5 Wp
Effectiveness	14 %

### For the battery

Type	accumulator, hermetic, no maintenance, lead acid
Nominal Voltage	4V
Capacity	5.0 Ah

### For the mechanical construction

Type of optical material	polycarbonate
Battery ventilation	by a special valve at the bottom of the lamp
Hermetic/Air proof	polyurethanes grouting

## COMPOSITION OF THE EQUIPMENT

- The following components are included in the construction:
  - LED light source;
  - photovoltaic solar panel;
  - controller;
  - battery;
  - valve for battery ventilation.
- Options:
  - Remote control by infrared programmer
  - Security bolts.

## FUNCTIONS OF THE BUILT IN CONTROLLER

- Lamp's switch on/off regarding the luminance
- Setting the luminous intensity mode
- Setting the flash mode
- Administration by remote control
- Optimum charging/discharging batteries control.

### Notes:

- All luminous flashing specifications are based on 100% intensity with 12.5% duty cycle.
- Constant operating temperatures over 25°C can influence upon battery lifetime.