

SM-1

SOLAR POWERED LED MARINE LANTERN with range up to one nautical mile /1.85 km/

*THE SM-1 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-1 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-1

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 = 166 mm / Ø = 178 mm	
Weight	1.18 kg	

For the lamp

Emitted light colours:	green	red	amber	white
Nominal night visibility for the relevant colour in nautical miles:	~1.3	~1.1	~1.0	~1.2
Luminous Intensity for the relevant colour in candels:	~3	~2	~1,5	~2
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
Maximal power	0.8 Wp
Effectiveness	14 %

For the battery

Type	accumulator, hermetic, no maintenance, lead acid
Nominal Voltage	4V
Capacity	2.5 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.