



# PMAPI-SC35

Self Contained LED Marine Lantern  
3 - 6.3 NM at 0.74T / 3.5 - 7.8 NM at 0.85T



## OVERVIEW

The PMAPI-SC35 is a weather protected solar powered self-contained marine lantern with an LED light source that can be combined with optional GPS or IO port. It can be used as an independent operation for extensive time periods. The high intensity LEDs on a metal core PCB for maximum useful life, with flexible electronic configurations. You can use on/off shore platforms, port and harbor, aquaculture, fixed or floating structures.

## KEY FEATURES

- Configurations: SS (Standard Solar) & LS (Large Solar)
- Rugged, weather-resistant construction materials: High impact resistant polycarbonate for ice, ultraviolet exposure, salt air and seawater spray at a wide range of ambient temperatures
- High intensity, energy efficient fan beam LED array: Maximum visible range up to 7.8NM at 0.85T pending flash character in optimal conditions
- IR Remote: Powering on & off, set / retrieve configuration parameters such as flash pattern, effective intensity, day/night control, etc.
- IALA approved colors: Single color LED engine - white, yellow, red or green
- Serviceable: Battery pack is easily disconnected and replaced
- Integrated bird deterrent: No additional accessories required
- Longevity - Estimated average service life of 10 years
- Eternal battery disconnect switch allows for simplified transition from storage to operation

## PERFORMANCE FEATURES

- Intensity control: Effective lantern intensity set on Schmidt-Clausen method
- Flash character control: 256 programmable flash characters and 2 custom flash characters
- Day/Night transition level settings: Programmable for active at all times or only after sunset. Day / Night level settings (sunset / sunrise transition) can be field programmed
- Calendar control - Programmable season on/off date
- Input protection - Lantern power input from the battery is reversed polarity protected for field repair or light head replacement
- Ripple delay - 0.05 to 12.7 seconds & master/slave sync options
- Storage mode - Automatic storage mode with adjustable automatic wake up
- Programmable sleep and test modes
- Battery low voltage cutoff
- Battery voltage and internal temperature LED flashing reports, triggered by commands from the IR remote control (unit will flash 1 1 9 sequences for a 11.9 V battery for example)
- Battery voltage and internal temperature could be interrogated during day time, even when the lantern is off by the photocell control system.
- Dynamic compensation circuitry for the candela low output, based on internal temperature, LED flash duration and LED color, to always keep the same programmed output intensity

## OPTIONAL FEATURES

- GPS Synchronisation: Optional internally mounted hardware will allow the lantern to flash in-sync with other PMAPI and third party lanterns that are GPS synced
- External I/O port: Allows connection to an external monitoring device or for hardwired synchronisation to other lanterns
- Charging port: Charge / recharge the battery prior to installation

## PHYSICAL SPECIFICATIONS

Operating temperature range (°C)	-30°C to +°50C
Operation humidity (%)	100
IP Rating	IP68*
Body material	UV stable polycarbonate
Lens material	Acrylic
Mounting	3 - 4 hole, Ø 200mm

## DIMENSIONS

Width (mm / in)	242mm / 9.53"		
Depth (mm / in)	242mm / 9.53"		
	<b>SC35-SS</b>	<b>SC35-LS1</b>	<b>SC35-LS2</b>
Height (mm/in)	405 mm / 15.94 in	596 mm / 23.45 in	596 mm / 23.45 in
Weight (kg/lb)	5.89 kg / 13 lb	7.53 kg / 16.6 lb	11.52 kg / 25.4 lb

## STANDARDS

EMI/EMC	EN55015:2013 radiated and conducted emissions* EN61547:2009 Immunity FCC 47 CFR Section 15 Class A*
Optical Test	IALA Recommendation E-122 (2001) and E-200-3 Part 3 (2008)
Colour	IALA Recommendation E-200-1 Part 1
Daylight	IALA Recommendation 1038
Power Supply	IEC60945 Section 7 normal and peak voltage, and reverse polarity protection
Ingress	P68 to IEC60529
Shock	MIL-STD-202G Method 213B Cond. H*
Vibration	MIL-STD-202G Method 204D Cond. B*
Immersion	MIL-STD-202G Method 104A Cond. B withstands immersion to 1m depth*

## ELETRICAL SPECIFICATIONS

Battery nominal voltage	12V
Battery autonomy	20 DAYS
Battery type	Lead Crystal
Battery capacity	12 Ah or 24Ah (2x12)
Standby power	3.8mA Day current 5mA Night off current
Solar model type	Monocrystalline
Solar panel orientation	90° in azimuth
Solar output	8W (2x4) or 16W (4x4)

- \*\*Battery autonomy is more than 20 days at 30% duty cycle flash pattern at 43cd effective intensity setting (Data based on SS version)
- Specifications taken at standard indoor conditions
- Solar module characteristics taken from manufacturer data

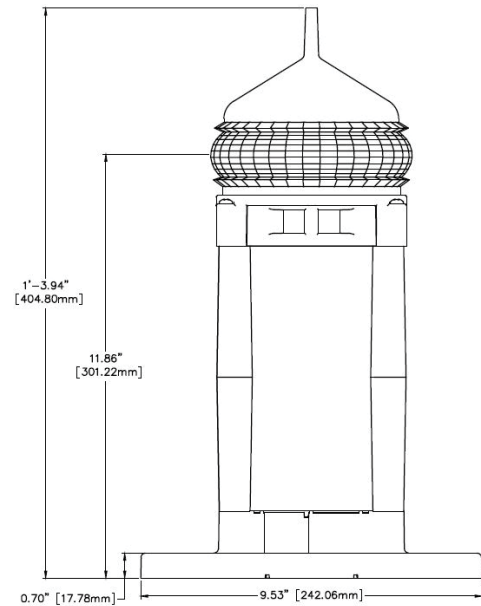
## OPTICAL SPECIFICATIONS

LED COLOR	WHITE	YELLOW	RED	GREEN
Light source	12 White LEDs	12 White LEDs	12 White LEDs	12 White LEDs
Visible range (NM) <sup>1</sup>	3 - 6.3	3 - 6.3	3 - 6.3	3 - 6.3
Effective intensity range (cd) <sup>2</sup>	10 - 180 <sup>3</sup>	10 - 180 <sup>3</sup>	10 - 180 <sup>3</sup>	10 - 180 <sup>3</sup>
Horizontal divergence	360°	360°	360°	360°
Vertical divergence at 50% intensity	± 3.5°	± 3.5°	± 3.5°	± 3.5°
Peak intensity (cd)F	325	325	325	325

<sup>1</sup> Visible range based on IALA standards at atmospheric transmissivity of 0.74

<sup>2</sup> Effective intensity computed from Blondel Rey method

<sup>3</sup> Maximum Effective Intensity limited by ambient temperature and flash length. See PHAROS-SC35 Standby Calculator for expected performance.



Class A, B and C compliant in accordance with USCG 8th District 33 CFR Part 67 for artificial island and structures, and 33 CFR Part 66 for 3 and 6.3 NM private navigation aids.



\*All values are subject to change without notice.

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