

CRSE LED SC Marine Lantern



CRSE LED Self-Contained Marine Lantern

The CRSE LED self contained/self powered LED lantern is a very rugged low maintenance, complete bolt-on light package designed for the extreme conditions encountered by marine aids to navigation on buoys and fixed structures. It incorporates the LED light head, electronics with Daylight Control Sensor, solar panel(s) and battery. There are four power levels for up to 5 nautical miles visibility and 256 flash rhythms selectable by DIP switch. It is designed to meet the requirements of U.S. Coast Guard Specifications 502 and 503 for buoys and fixed structures.

The housing size is the same for all power systems. The housing is molded from the same material as buoys, kayaks and other practically indestructible products. The light color is molded into the housing for easy identification during daylight. The lantern will actually float if accidentally dropped into the water, which allows for easy retrieval.

The solar panels are polymer coated for long term protection while all other parts are either plastic, stainless steel or anodized marine grade aluminum.

The sophisticated side emitter lens provides superior uniformity in the horizontal plane (no molding seams) as well as a wide 7.5° symmetrical vertical divergence to 50% of peak intensity (FWHM) with excellent symmetry. The state of the art flasher and driver circuits powering the LEDs provide high efficiency with its Pulse Width Modulated (PWM) constant current drive system.

Its construction design allows for many assembly variations in order to meet specific customer requirements for light intensity, rhythm duty cycle, latitude and whether for buoy or fixed structure. The system is very versatile in that the number of LED's, LED color and housing color, number of solar panels, and size of batteries can be varied to meet these customer requirements.

Mounting of the lantern is simple. The lantern base has three equally spaced 1/2"-13 UNC threaded inserts on a 200 mm diameter bolt circle, the same as most existing lanterns so it makes for an easy replacement.

"Light Waves To The World"

CRSE LED Self-Contained Marine Lantern

Temperature Operating Range:

-22°F to 125°F (-30°C to +50°C)

Humidity: MIL-STD-202F Test

Condition B, Method 103B

Wind Speed: 140+ Knots

Immersion: MIL-STD-202F Test

Condition B, Method 104A

Shock: 75G's MIL-STD-202F Test

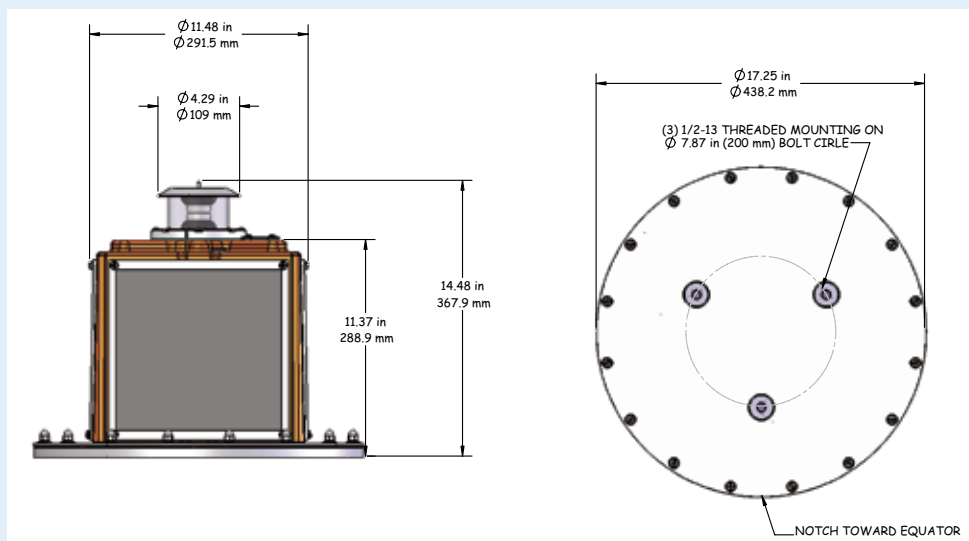
Condition H, Method 213B

Vibration: 5G's MIL-STD-202 Test

Condition B, Method 204

Electromagnetic Interference:

EN 61000-4-3 100MHz to 20GHz
to performance criteria A at 200 V/m



Materials:

- **Housing:** Polyethylene with UV inhibitors
- **Base:** High density polyethylene
- **Light Head:** Anodized marine grade aluminum and cast acrylic lens and protector tube. Acrylic is superior to UV protected poly-carbonate for UV exposure.
- **Solar Panels:** Polymer coated with grommets in corners for bolt on structural protection. One to four panels available. Buoys require four panels while fixed structures, being south facing, can have between one and four panels depending on power requirements.
- **Membrane Vent** allows pressure equalization between interior and exterior of lantern
- **Batteries:** 12, 16, 32 or 40 ampere hour lead acid (20 hour rate)
- **Weights:** 24 lbs (10.9Kg), 30 lbs (13.6Kg), 42 lbs (19Kg), 49 lbs (22.2Kg) Add about 7 pounds (3.2Kg) more for shipping



CRSE LED SC program access

- **Light Intensity:** (4) switch selectable power settings. 70cd maximum - 90th percentile (up to 5 nautical miles) with (2) LEDs. **Optional** middle plate(s) can hold one or two additional LEDs and can be stacked to increase intensity
- **Colors Available:** Red, Green, White, Amber, Blue (by special order) - meet recommendations of International Association of Lighthouse Authorities (IALA)
- **Rhythms:** Up to 252 switch selectable with (4) available for infinite rhythm selection
- **Vertical Divergence:** 7.5° to 50% of peak intensity (FWHM). Symmetrical with horizontal plane.
- **Simple access to power ON/OFF switch and rhythm DIP switch** through cover on top of lantern. No other accessory parts required.
- **Lens:** High efficiency, acrylic, superior horizontal uniformity (Patent pending)
- **Daylight Control** switches unit on and off automatically at dusk and dawn and other low light conditions between 250 and 320 lux \pm 50 lux
- **LED Manufacturer Rated Life Expectancy:** 100,000 hours on steady - much longer when flashed
- **Separate constant current drivers** for each LED for enhanced reliability
- Produced in **ISO 9001** certified factory

Specifications:

- **Mounting Hole Pattern:** Three equally spaced threaded bolt holes equally spaced on a 200 mm diameter bolt circle. The threaded bolt holes accept 1/2"-13 UNC stainless steel bolts.
- **Solar Panels:** 3 Watts and 6 Watts panels available

Specify part number as follows: SBC where S= # of solar panels, B= Battery ampereage, and C= Color. For example: Model 116G = 1 solar panel, 16AH battery, Green.

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