

FA-249 LED 15 NM Gimbaled Lantern

The FA-249 15 NM LED Gimbaled Lantern is the technological solution to the problem posed by the movement of large navigation buoys, floating production systems (FPSO) and tension leg platforms. Automatic Power has adapted the lantern to house long lived LEDs mounted in parabolic reflectors.

The FA-249 15 NM LED Gimbaled Lantern maintains its optic in a vertical position for inclinations of +/- 9 degrees (18 degrees total). This assures the **full light intensity is continually available** in the most severe sea conditions.

The light consists of four linear arrays very high flux LED's individually mounted in a parabolic reflector and driven by specially designed electronics. The highly efficient reflector uses a state-of-the-art dichroic hybrid spectral metal coating. The LED's are mounted on specially designed heat sinks to keep the temperature of the LED below 120° C to assure the design life of 60,000 hours.

The parabolic reflectors are mounted on a two-axis gimbal within a silicone-filled base, all protected by a 250 mm lens cover. Gimbal hinges are of a special polypropylene material tested to 69 million flex cycles (no metallic parts). The heavy silicone fluid in which the gimbal counterweight is immersed maintains a viscosity of 100,000 SSU at all operating temperatures. This dampens any violent buoy motion and lengthens the natural period of the mechanism to over nine seconds.

Please note that for a 15 NM range to be achieved, the minimum height of the light above sea level and the minimum height of observer above sea level must be taken into consideration.

Restrictions apply to duty cycles above 30%. Consult factory for details.

Patent No.: US 7,461,952 B2

Form NO.: 081511A

PHOTOMETRIC DATA

- **90th percentile intensity:** 20.300 cd
- **Vertical divergence at 50%:** 3.2 degrees but maintained over a range of ±9 degree tilt compensated by the gimbaled mechanism within lantern.
- **Applied Power @24V, 11.4A or 274W** on flash
- **Beam:** 360 degrees horizontal. Uniformity within ±20%.

TECHNICAL DATA

- **Lens:** 250 mm precision-molded, high-temperature, acrylic cover.
- **Lighting Source:** Stacked array of high flux, high efficiency 1x22 Procyon LED Light Engines.
- **Height:** 36 3/16" (919 mm) **Weight:** 64 lbs. (29 kg)
- **Mounting:** 4 each 20mm diameter holes on 200 mm bolt circle.
- **IP Rating:** 55

ELECTRIC CONTROL MODULE (External only)

- **Input:** 20-30 Volts DC reverse polarity protected.
- **Power:** 275 watts on flash maximum. 0.8 watts quiescent current.
- Synchronization terminal for UNIFLASH® II/III wireless synchronization system or hardwired sync circuit.
- 255 Pre-programmed flash rhythms
- **Controller Housing:** 20"x16"x6" NEMA 4x fiberglass.
- **Operating Temperature:** -40°C to +55°C

