

FA-249 LED Gimbaled Lantern

The FA-249 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 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 50°C to assure the design life of 50,000 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.

CERTIFICATIONS:

- Approved by the U. S. Coast Guard for use on Class A structures in the 8th Coast Guard District at 4 watts.
- Factory Mutual approved as Nonincendive for use in Class I, Division 2 Groups A, B, C & D, and Class I, Zone 2, Group IIC, Hazardous (Classified) Locations, for average power not to exceed 19.2 watts.

NI/II/2/ABCD/T6 Ta ≤ +49°C/T5 Ta ≤ +64°C.
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Form No.: 081511C

TECHNICAL DATA

- **Lens:** 250 mm precision-molded, high-temperature, acrylic cover.
- **Lamp:** Array of high flux, high efficiency LED's

PHOTOMETRIC DATA

Input Power, W	WHITE 1x6R	RED 1x9C	GREEN 1x6R	YELLOW 1x6R
84			5170	
68		5880	4660	
50	3500	5410	3400	
36	3250	4380	3100	2250
20	2200	2560	1990	1580
10	1350	1280	1120	960
2.5	350	300	280	250

- **Beam:** 360 degrees horizontal. Uniformity within-10%.
- **Vertical divergence at 50%:** 3.2 degrees but maintained over a range of ±9 degree tilt compensated by the gimbaled mechanism within lantern

MECHANICAL DATA

- **Height:** 36 3/16" (919 mm). Weight: 64 lbs. (29 kg).
- **Mounting:** 4 each 20mm diameter holes on 200 mm bolt circle.

ELECTRIC CONTROL MODULE

- **Input:** 10-30 Volts DC reverse polarity protected.
- **Power:** 50 watts on flash maximum. 0.1 watts quiescent current. 12 selectable power level settings.
- Synchronization terminal for UNIFLASH® II/III wireless synchronization system or hardwired sync circuit.
- 15 Pre-programmed flash rhythms plus 1 for user programming.

