

FA-250LED MARINE LANTERN

The only modern acrylic lantern with an internal lens protected by a smooth outer cover, the FA-250 lantern is designed to give the optimum mix of high horizontal candlepower, vertical divergence, reliable output under varying environmental conditions, adaptability to different signaling requirements, simple logistics, and long service life with reduced spare parts requirements.

The precision-molded acrylic lens has better optical characteristics, and higher transmission than glass, and longer-term dimensional stability than cut acrylic. Its refractive index and color are easily controlled, it is much lighter in weight, and its color filter transmission is, typically, 25% higher than glass. Any exposed lens in the marine environment will collect water from rain, salt spray or condensation in the lenticular indentations of the lens. As water has a much higher refractive index than air, the result is an immediate loss in lens efficiency and a reduced signal output. After an exposed lens' first "wetting" in field service, nominal ranges based on laboratory rating for the lens are meaningless.

Unlike all its competitors, the FA-250 lantern, with its smooth, protective acrylic lens cover, eliminates the buildup of fillets of moisture, dust, salt spray, raindrops and other contaminants on the internal Fresnel lens prisms. Rain also tends to wash contaminants from the smooth lens cover. The resulting improvement in performance is dramatic. Field-testing of exposed Fresnel prisms recorded 14.3% loss of candlepower in six weeks of exposure. The same Fresnel lens with cover recorded only 1.6% loss during the same test period.

The FA-250 lantern system offers several advantages for offshore platform applications. It is not uncommon for platform obstruction lights to be damaged by storms, sandblasting or painting over spray, and platform maintenance functions. With the lens cover and the cast-aluminum base, damage to an FA-250 lantern is typically limited to the inexpensive lens cover. Other lanterns feature fiberglass bases and an exposed Fresnel lens--both of which are vulnerable to damage and expensive to replace. The FA-250 lantern has lower life cycle costs in lower initial spare parts outlay; reduced routine maintenance spares and reduced vulnerability to damage on platforms.

The FA-250 lantern can do many jobs. It serves as a basic 360°omni directional light. Due to the lens cover, it can be simply and inexpensively converted to a different color or to color sectors. One or two condensing panels may be added between the lens and the cover to produce directional or bi-directional concentrated beams for ranges/leading lines and channel marking. Each panel intercepts 60 degrees of light and refracts it into a narrow, intense beam of approximately ten times the candlepower of the lens without the panel.



Lanterns are Factory Mutual NEC Class I, Division 2 approved. NEC Class I, Division 1 Lanterns and IEC Zone II Lanterns are available.

Specifications subject to change without notice

To increase light output over a wider sector, the optic may be fitted with reflex mirrors, which provide a 30% increase in candlepower and increased vertical divergence over a 60° sector opposite the mirror.

An additional unique feature of the FA-250 is the optical bird spike that adds 8% to the horizontal beam by diverting the light that is normally lost through the top of the lantern.

The FA-250 base is made of corrosion resistant aluminum. Two-silicone rubber lens O-rings provide an airtight seal. Lens and base assembly are hinged for easy access to the interior of the lantern. Electrical access is through four 3/4" NPT threaded entries in the base of the lantern.

The FA-250 has the widest vertical divergence of the long-range omni directional signaling lanterns. With commonly available lamps, it complies with the traditional IALA minimum vertical divergence of 2.5° and the FAA minimum vertical divergence of 3.0°.

Extremely high flux, compact Red/Green LEDs mounted on a heavy duty heat sink and encapsulated inside a sealed housing. The STABRITE® system is designed to maximize the life of the LED array. The system provides a secondary environmental enclosure independent of the lantern housing to assure that moisture does not reduce the life of the LED

Additionally, the heavy duty heat sink maximizes the life of the LED array by keeping the maximum temperature of the array to less than 50°C. The LED array/diffuser system approximates a marine signal lamp located at the focal point of the lens to maximize the output of the lantern in the horizontal plane with horizontal uniformity of the beam.

Fixed Intensities (Candelas)

Input Power, W	RED	GREEN	WHITE	YELLOW
3.1	200	216	278	178
6.2	340	366	538	301
12.4	425	535	915	439
15.6		580	1055	475
19.4		680	1239	

Vertical divergence is 4 degrees to 50% and 9 degrees to 10%.

Maximum LED power dissipation for flashing lanterns for full output is 6 watts.

Red LED/Red Lens, Yellow LED/Yellow Lens and Green LED/Green Lens filter factors are 0.85.

TECHNICAL DATA

- **LENS:** 250 mm 360° visibility acrylic Fresnel lens with smooth, self-cleaning lens cover available in clear, red, green, and amber. Colored sector inserts available
- **OPTICAL BIRD SPIKE:** Optional. Increases candlepower by 8%.
- **CONDENSING PANELS:** Optional. Panels are curved to fit between the cover and the Fresnel lens. Adapts lantern for use as directional or bi-directional leading light.
- **REFLEX MIRROR:** Optional. Mounts in interior of Fresnel lens. Increases candlepower 30% over a 60° sector.
- **SYNCHRONIZING SYSTEM:** Optional. Uniflash®-3 wireless synchronizing system.
- **MATERIALS:** Acrylic lens and lens cover. Lexan® lens covers optional, copper-free cast aluminum base, stainless steel fittings, double silicone-rubber lens gaskets.
- **FINISH:** Clear alodine and baked polyurethane painted, gray base.
- **ACCESSORIES:** Spirit Level, Focusing Marks, Reflex Mirror, Condensing Panels, and Screen Printed Azimuth Ring
- **MOUNTING:** Four each 5/8 inch by 1-inch slots on a 7 7/8 inch bolt circle, 90° apart.
- **DIMENSIONS:** 15in. X 17in. X 28in, 19.5 pounds
- **SHIPPING DATA:** 18in X 20in X 30in, 35 pounds.

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