

FA-250 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.

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°



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

Fixed Intensities (Candelas)

Lamp	FA-250 with Bird Spike	FA-250 with condensing panel*
C-8 Filament		
6v 0.25a	43	400
6v 0.46a	100	900
6v 0.70a	150	1400
6v 0.90a	210	1900
12v 0.25a	70	630
12v 0.55a	180	1800
12v 0.77a	270	2700
12v 1.15a	430	4300
12v 2.03a	860	8600
12v 3.05a	1190	11900
12v 9.0a	6270	56430
CC-8 Filament		
12v .5a	476	4384
12v 1.0a	877	8077
12v 2.0a	1883	17342
12v 3.0a	2483	22868
Halogen Lamps		
6.3V 38W	3280	28750
12V, 20W	1150	10350
12V, 35W	2550	22950
12V, 50W	2700	24300
12V, 75W	3575	32175
12V, 100W	6500	55,220
80V, 500W	15,320	140,000
120V, 500W	10,500	90,000

Note: For red lens cover multiply above by .30
For green lens cover multiply above by .32
For yellow lens cover multiply above by .68

*Candela measured on axis of the condensing panel

**Ventilation required if average load exceeds 75 watts.
Natural ventilation to 165 watts. Internal fan to 250 watts and
external ventilation fan for average loads above 250 watts.
Vertical Divergence 2.5°-4.7° to 10%.

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.
- **FLASHCHANGER®:** Four- or Six-place motor driven, APCL-5/APCL-10 with selectable flash rhythms, pulse width modulation regulation, solar charge regulator, monitoring, synchronization, self-test function, communications port, lamp out control terminal, photocell, and enhanced environmental protection.
- **SYNCHRONIZING SYSTEM:** Optional. Uniflash®-S wireless synchronizing system.
- **LAMPS:** Prefocussed T3.5, S-8, or S-11 envelope and C-8 or CC-8 filament, incandescent or tungsten halogen lamps to 500 watts.
- **MATERIALS:** Acrylic lens and lens cover. Lexan® lens covers optional, copper-free cast aluminum base, stainless steel fittings, double silicone-rubber lens gaskets. ®Registered trademark.
- **FINISH:** Clear alodine and baked polyurethane painted, gray base.
- **ACCESSORIES:** Spirit Level, Focusing Marks, Reflex Mirror, Condensing Panels, and Screen Printed Azimuth Ring. Two-place lampchanger for 500-watt lamps.
- **MOUNTING:** Four each 5/8 inch by 1-inch slots on a 7 7/8 inch bolt circle--90° apart.

DIMENSIONS:

19.5 pounds
15in. X 17in. X 28in.

SHIPPING DATA:

35 pounds
18in X 20in X 30in.

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