



FA-240 RANGE LIGHT WITH LEDS

The FA-240 Range Light has been used on more leading lines than any optic in the world, and it continues to set the standard as a unidirectional aid to navigation.

The rugged FA-240 LED Range Light easily meets all the requirements of a modern unidirectional aid to navigation and produces a high intensity light in a relatively narrow beam from impressively low wattage.

The FA-240 LED Range Light represents the optimum mix of high horizontal candlepower, vertical divergence to accommodate varying heights of eye of shipping, reliable output under varying environmental conditions, and adaptability to different signaling requirements including wireless synchronization, simple logistics, and long service life with reduced spare parts requirements.



Features

- PMAPI's patented **SE LED array** mounted in the same location as a standard FA-240 Lampchanger (3 watts maximum power consumption; 50,000 hrs + life)
- A range of available Spredlite lenses to assist in selecting the degree of horizontal divergence
- LED Controller with 256 selectable flash rhythms, 10 levels of current to the LED array ranging from 0.3 watts to 3 watts, solar charge regulator, RS-485 & RS-232 monitoring and communications port, synchronization terminal, and external photocell. Interchangeable with CG-6P lampchanger.
- Optional wireless UNIFLASH® III system for synchronizing FA-240 leading lights; increased conspicuity with UNIFLASH® III wireless synchronization system
- Various accessories including rifle-type aiming sights, leveling and aligning adjustments in the base, flat pad on top of unit for spirit level, detachable sunshade and TR-3 Power Supply.

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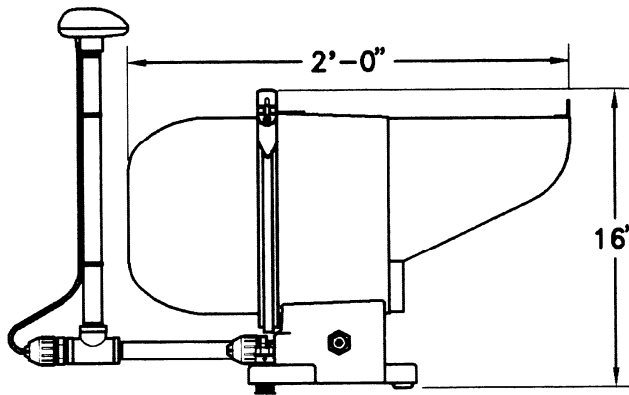
SPECIFICATIONS

Dimensions:	406.4mm x 317.5mm x 609.6mm (16" x 12.5" x 24")
Weight:	12.7 kg (28 lbs.)
Input Voltage:	12 or 24 VDC or 120/240 VAC**
Power Consumption:	1.5 – 3 W
Available Colors:	White, Green, Red, Amber
Quiescent Current:	≤ 7mA
Lens Type:	Flatlite; 3.5°, 8° and 30° Spredlite
Vertical Divergence:	5° to 10%
Monitor and Control:	Optional
Synchronization:	UNIFLASH® III Wireless Synchronization (Optional)
Lantern Housing:	Painted Anodized Aluminum
Operating Temperature:	-20°C to + 40°C

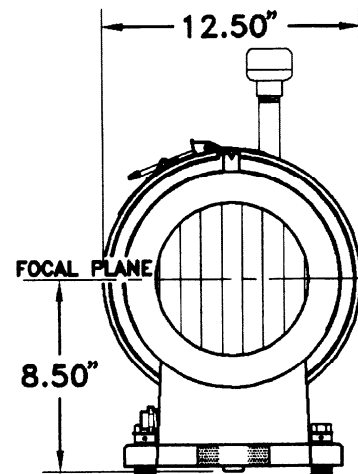
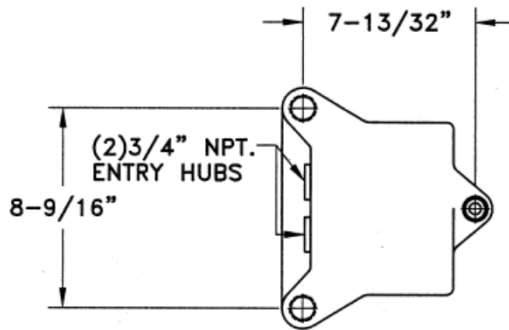
*Specifications subject to change without notice.

**External power supply will be required for AC units fitted with GPS synchronization

**UNIFLASH III
(OPTIONAL)**



SIDE VIEW



FRONT VIEW



ADDITIONAL INFORMATION

PERFORMANCE

LAMP			FIXED INTENSITIES (Candela)			
LED	Volts	POWER	Flatlite*	3.5° Spredlite*	8° Spredlite*	30° Spredlite*
GREEN	12.0	3 W	26400	6600	4500	975
GREEN	12.0	1.5 W	13200	3300	2750	480
RED	12.0	3 W	32900	8240	5630	1220
RED	12.0	1.5 W	16450	4120	2815	610
AMBER	12.0	3 W	13160	3300	2250	480
AMBER	12.0	1.5 W	6580	1650	1120	240
WHITE	12.0	3 W	16450	4120	2815	610
WHITE	12.0	1.5 W	8225	2060	1410	355

Note: *Candela measured on axis. Spredlite lens spread is total beam to 50% of intensity. Vertical Divergence 5 degrees to 10%.

Range lights are uni-directional, relatively narrow beam lights installed in pairs on extensions of the channel center line. They are generally placed on shore. The rear light is higher and behind the front light. A navigator keeps the lights vertically aligned to follow center line of the channel.

Primary considerations in designing a range light installation are:

1. The maximum distance from which the front and rear lights must appear as two distinct and separate sources. The rear range light should be high enough above the front light so that the two lights do not blend.
2. The navigable width of the channel (See W in formula). This determines:
 - a. The minimum distance between the lights in order to provide sufficient sensitivity to keep the navigator within the confines of the channel. (See R in formula)
 - b. The maximum distance between the lights beyond which the sensitivity would be so great as to cause the navigator to fear "opening up" or using those portions of the channel near the edge. (See R in formula)
3. The "sensitivity" of the range.
4. The candlepower required for adequate visibility.

The sensitivity (K) of the range is determined by the formula:

$$K = WR/D(H-h)$$

Where:

K = Coefficient of sensitivity

W = Width of channel (ft.)

R = Distance between front and rear lights (ft.)

D = Distance from front light to limit of useful range (ft.)

H = Elevation of rear light above mean high water (ft.)

h = Elevation of front light above mean high water (ft.)

Values of K	Description of Sensitivity
Under 0.6	Not Acceptable
0.6 to 1.0	Poor
1.0 to 1.5	Fair
1.5 to 2.5	Good
2.5 to 3.5	Very Good
3.5 to 4.5	Excellent

