

The Original Solar-Powered LED Marine Lights Four Nautical Mile¹



○ Innovative optics and lens design

Means wider vertical divergence and greater light uniformity.

○ Completely self-contained

The solar panels, batteries and lights are brought together into one unique product.

○ Sealed Unit

Waterproof and vandal resistant.

○ Automatically turns on & off

On at dusk and off at dawn.

○ Self-cleaning solar dome

Proprietary, patented dome protects solar panel while improving efficiency.

○ Ultra bright LEDs

Uses an array of bright LEDs (light emitting diodes)
-no bulbs to replace, ever.

○ Multiple mounting patterns

Features 3, 4 and 5-bolt mounting patterns.



Model M704-5

Designed Coast Guard Tough

The Carmanah Model M704-5 4NM (7.4km) solar-powered LED lanterns are the world's most advanced, solar-powered LED navigational and hazard-marking lanterns. They are completely self-contained, install in minutes and require no maintenance or servicing for up to five years.

Quality Manufacturing

The Model M704-5 is built for performance in harsh weather conditions. The Model M704-5 uses an array of ultra-bright LEDs and can be programmed with over 200 flash patterns. Manufactured in accordance with ISO 9001:2000 Quality Assurance Standards, the Model M704-5 produces light output in IALA's four international chromaticity colors: green, red, amber and white.

Reliable Technology

Through the innovative combination of solar power and LED technology, the M704-5 lanterns charges during the day, even under cloudy conditions, and turn on automatically at night. Instead of relying on short-lived incandescent bulbs, the M704-5 uses durable, ultra bright light emitting diodes (LEDs), which have an operating lifespan of up to 100,000 hours.

Applications:

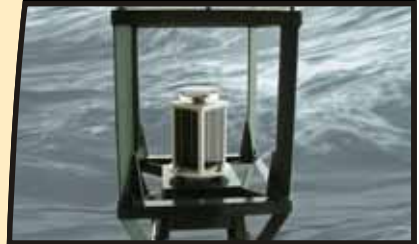
- Aids to navigation
- Private aids to navigation
- Port and marina entrances
- Channel and canal markers
- Offshore oil & gas infrastructure
- Research buoys



Carmanah's new optics and lens design mean wider vertical divergence and greater light uniformity.



Canadian Coast Guard, Canada



Model 704-5



Milford Haven, South West Wales.

30 day satisfaction guarantee and three year warranty!

CHANGE THE WORLD WITH US™

Canada & US: 1-877-722-8877

Worldwide: + 250-380-0052

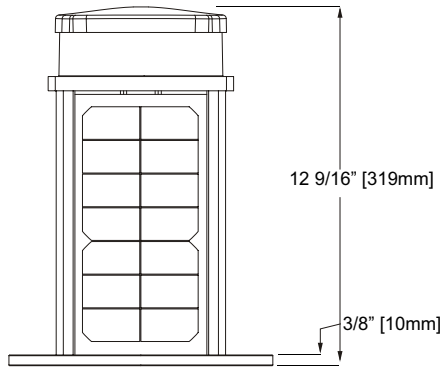
www.carmanah.com



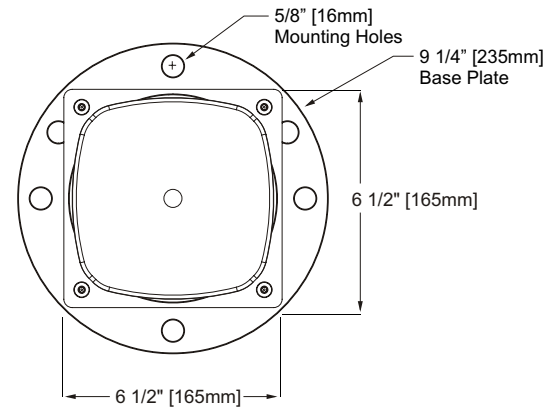
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Side View



Top View



SPECIFICATIONS

LIGHT OUTPUT

Effective Intensity <i>(Transmissivity constant of 0.74)</i> Colors Available: Green, Red, Amber, White	FLASHING² ~ 36 Candela
Nominal Night Range ³ <i>(Employs Method of Schmidt-Clausen)</i> Colors Available: Green, Red, Amber, White	~ 4 NM
Vertical Divergence	10°
Horizontal Output	360°

OPERATION

Autonomy ³ at full charge	600 Hours
Minimum Equivalent Peak Sun Hours to Maintain Minimum Autonomy	4.2 Hours
Latitude Range ⁴	55° S to 55° N
On / Off Level	70 / 100 Lux
Illumination Technology	Ultra-Bright 24 Light Emitting Diodes
Lifespan of LEDs ⁵	Up to 100,000 Hours
Chromaticity of Color Output	Meets IALA specifications
Available Standard Flash Patterns <i>(Custom patterns available)</i>	256 including "steady-on" (user-adjustable)
Power Management System	MicroSource™

CONSTRUCTION

Solar Panels	Mono-Crystalline
Battery	Potted with UV-protected polyurethane
Lens Material	Recyclable lead-acid
Battery Venting	UV stabilized polycarbonate
Sealing	Vent at the bottom of the lantern
Weight	Self-contained unit, sealed with gaskets
Lantern base	26 lbs (11.75 kg)
Mounting	Marine grade aluminum
	3, 4 & 5 bolt mounting pattern

ENVIRONMENTAL and ELECTRICAL

Temperature Range ⁶	-40° to 176° F (-40° to +80° C)
Waterproof	As per IP67 (NEMA 6)
CE Approval	As per EN 60945:1997

TRADEMARKS and PATENTS

Trademarks and Patents	US Patents: 5,782,552 & 6,013,985 European Patent Application: 96925627.0 Other Patents Pending
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Optional Infrared Programmer



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All specifications are subject to change without notice.

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