



MODEL

M704-5

Solar-Powered LED Marine Lanterns



Featuring up to 5 nautical miles visibility, Carmanah's Model M704-5 is the original self-contained solar LED marine lantern, trusted by the world's largest maritime authorities.

LIGHT OUTPUT AND OPERATION	SPECIFICATION
Visibility ^{1,2}	4/5 nautical miles (7.4 to 8.5 kilometers)
Peak intensity (360-degree average, green LEDs)	93 Candela
Peak intensity (as per IALA rating)	83 Candela
IP68 waterproof rating	Yes
Temperature range	-40° to +176° F (-40° to +80° C)
Vertical divergence	10°
Vibration tested	As per USCG 502G CH3, MIL-STD-202G Method 204D ³
Shock tested	As per USCG 502G CH3, MIL-STD-202G Method 213B ⁴
Autonomy ⁵ (flashing) at full charge	600 hrs
Available LED color	Red, green, amber or white
Flash patterns	256+
Programmable (infrared)	Yes
GPS capable	Yes (Optional)

CONSTRUCTION	
Light source	High-powered LEDs
Lifespan of LEDs	Up to 100,000 Hours
Lens material	UV stabilized polycarbonate
Battery	Replaceable
Battery amp-hour	50Ah
Battery venting	Yes
Lantern housing	Marine grade aluminum
Sealing	Self-contained unit, sealed with gaskets
MICROSOURCE®	Yes
Scheduled maintenance	Up to 10 year lifespan
Mounting options	3, 4 or 5 bolt
Weight	26 lbs (11.75 kg)

TRADEMARKS, PATENTS AND APPROVALS	
WEEE compliant	Yes
RoHS compliant	Yes
CE Approval	As per EN 60945:1997
Trademarks and Patents	US Patents: 6,573,659 and 6,013,985 Other Patents Pending



Clients

- Australian Maritime Systems
- Brazilian Naval Commission
- Canadian Coast Guard
- CETMEF, France
- Indian Port of Kandla, India
- Maritime and Port Authority of Singapore
- NOAA – National Data Buoy Center
- Panama Canal
- Suez Canal, Egypt
- Trinity House Lighthouse Service, UK
- United States Coast Guard
- Vancouver Port Authority

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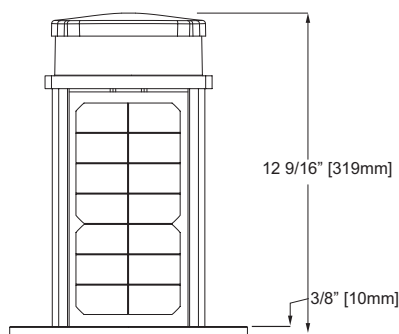
Email: info@carmanah.com

CHANGE THE WORLD WITH US™

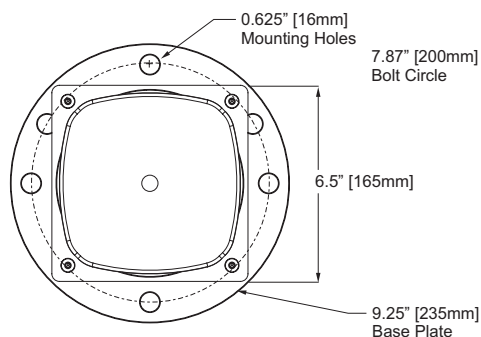
Solar-Powered LED Marine Lanterns Model M704-5



Side View



Top View



Accessories

Infrared Programmer



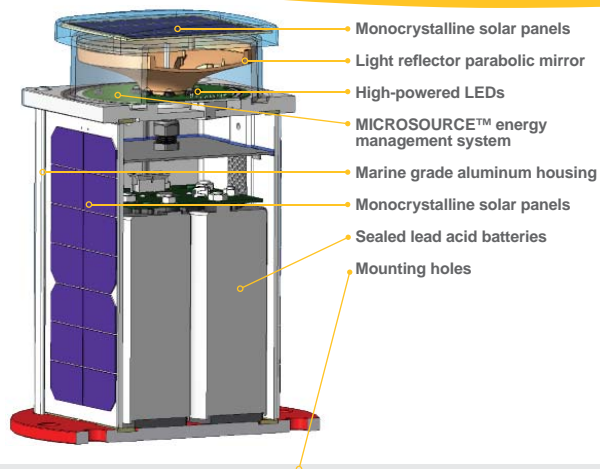
Security Bolt



Bird Deterrent



Mounting Plate



In use by coast guards, navies and port authorities in more than 110 countries, the Model M704-5 solar marine lantern is:

- **The original compact lantern** – 4 to 5 nautical miles (7.4 to 8.5 km)¹
- **Field-proven and durable** – technology tested over 15 years
- **Resistant to vandalism and theft** – high quality construction and mounting hardware
- **Patented technology** – innovative LED technology and energy management system
- **Third-party tested** – passed extensive shock and vibration testing
- **IP68 certified** – tested to higher levels of water ingress protection standards
- **Built to last** – a 10-year effective lifespan with LEDs operating up to 100,000 hours

The Model M704-5 is also:

- Manufactured in accordance with ISO 9001:2000 Quality Assurance Standards
- RoHS and WEEE certified
- Engineered to meet requirements of the USCG in 33 CFR part 66 for Private Aids to Navigation
- All of Carmanah's M704 series solar marine lanterns feature a colored base for easy identification of LED color

¹ Transmissivity of 0.74

² Actual range is dependant on flash pattern, intensity, and LED color.

³ Test Condition B (modified), Sinusoidal 5g peak, 10-2000Hz, 3 cycles per axis.

⁴ Test Condition H (modified), Sawtooth 50g peak, 6ms duration, 18 shocks total.

⁵ Actual figures for autonomy depend on the intensity level setting.



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