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

### Features & Benefits
- Replaces traditional 155mm 0.25 amp or 0.5 amp navigation lights
- Distance of visibility up to 3 nautical miles (5.4 kilometers)
- Available in red, green, amber, white and blue
- Any flash pattern available from the factory. Can also be programmed by the user using optional infrared remote control
- Completely self-contained and sealed against environmental conditions
- Extremely rugged, waterproof and vandal resistant
- Installation takes minutes and requires minimal technical expertise
- Features both four and five-bolt mounting patterns
- Provides up to five years of operation with no maintenance or servicing
- Replaceable battery packs available
- Will charge under nearly all weather conditions
- Up to 600 hours of operating capacity from a full charge
- Manufactured to ISO9001 Quality Assurance Standards
- 30 day satisfaction guarantee and three year warranty

The Carmanah Model 702-5 is the world’s most advanced, fully-integrated, solar LED three nautical mile (5.4km) navigation light. It installs in minutes and requires no maintenance or servicing for up to five years.

### Typical Applications
- Originally designed and built under contract with the U.S. Coast Guard, the 700 Series are the first solar-powered lanterns using light emitting diodes (LEDs) to enter the U.S. Navigational Aid System. The 702 is the larger version of the two models available in the 700 Series; it is intended for use in regions where daily solar illumination is greater than 1.0 hours of winter sunlight. The 702-5 also features an additional solar panel mounted on the top of the lens to further enhance the charging function.

### The Technology
- Utilizing an innovative combination of solar and LED technology, the 700 Series lights charge during the day, even under cloudy conditions, and turn on automatically at night. Instead of traditional incandescent bulbs, the 700 Series use durable, high-intensity light emitting diodes (LEDs), which have a lifespan of up to 100,000 hours. Therefore, other than replacing the battery packs approximately every 5 years, the 700 Series are designed to operate flawlessly with no additional servicing or maintenance.

### 30-Day Risk-Free Evaluation
- Order a Model 702-5 today and evaluate the product’s quality, performance and reliability for yourself. If you are not fully satisfied, you can return the unit within 30 days for a refund of the purchase price.

No external wiring, no battery or bulb replacement, no maintenance, no worries...
Model 702-5
Three Nautical Mile Marine Light

SPECIFICATIONS

LIGHT OUTPUT

<table>
<thead>
<tr>
<th>Effective Intensity (Transmissivity constant of 0.74)</th>
<th>FLASHING</th>
<th>STEADY ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>~ 29 Candela</td>
<td>~ 10 Candela</td>
</tr>
<tr>
<td>Red, Amber, White, Blue</td>
<td>~ 18 Candela</td>
<td>~ 6 Candela</td>
</tr>
</tbody>
</table>

Nominal Night Range (Employs Method of Schmidt-Clausen)

| Green                                           | ~ 3.7 NM | ~ 2.6 NM |
| Red, Amber, White, Blue                          | ~ 3.2 NM | ~ 2.2 NM |

Vertical Divergence: 7° at 50% intensity

Horizontal Output: 360°

OPERATION

Minimum Autonomy

| Minimum Equivalent Peak Sun Hours to Maintain Minimum Autonomy | 300 Hours | 150 Hours |
|                                                               | 1.5 Hours | 3 Hours   |

Latitude Range

<table>
<thead>
<tr>
<th>On / Off Level</th>
<th>55° S to 55° N</th>
</tr>
</thead>
</table>

Illumination Technology

| 16 or 24 LEDs, depending on color |

Lifespan of LEDs

| Up to 100,000 Hours |

Chromacity of Color Output

| Meets IALA specifications |

Available Standard Flash Patterns (Custom patterns available)

| 208 including "steady-on" |

SOLAR PANELS

Type

| Mono-Crystalline |

Maximum Power

| 12.6 Watts |

Efficiency

| 14% |

BATTERY

Type

| Pure-lead thin plate with starved-electrolyte |

Nominal Voltage

| 4 Volts |

Capacity

| 24 Amp-hr at 10-hr discharge rate |

CONSTRUCTION

Lens Material

| Polycarbonate |

Battery Venting

| Vent at the bottom of the lantern |

Sealing

| Self-contained unit, sealed with gaskets |

Weight

| 8.16 kg (18 lbs) |

ENVIRONMENTAL and ELECTRICAL

Temperature Range

| -40° to +80° C |
| (-40° to 176° F) |

Waterproof

| As per IP67 (NEMA 6) |

CE Approval

| As per EN 60945:1997 |

QUALITY CONTROL and PATENTS

Quality Assurance

| ISO 9001 |

Trademarks and Patents

| US Patents: 5,782,552 & 6,013,985 |
| European Patent Application: 9629627.0 |
| Other Patents Pending |

All specifications are subject to change without notice.

1 Actual range is dependent on flash pattern, intensity, and LED color.
2 All "Flashing" light specifications are based on 100% intensity setting at 12.5% duty cycle (code 064 - 15 flashes per minute).
3 Actual figures for autonomy depend on the intensity level setting.
4 Lights will function reliably at higher latitudes than 55° North or South if intensity/autonomy is properly adjusted to suit operating environment by an Authorised Carmanah Representative.
5 Consistent ambient temperatures above +25°C (+77°F) may affect overall battery life. Temperatures above +60°C (+140°F) may affect output.

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