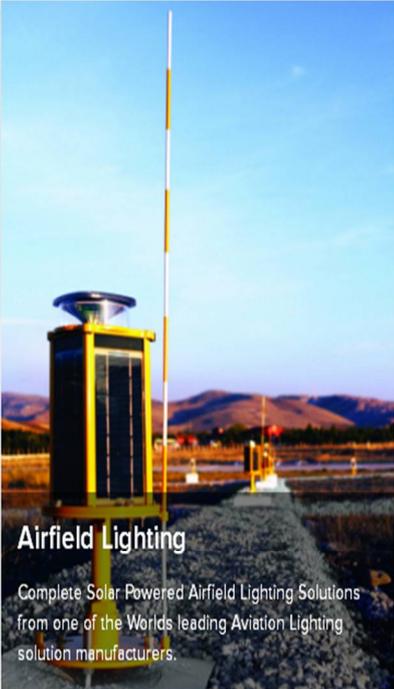


# Using the On-Line Tool to select the best Carmanah Self Contained Marine Lantern for your Application.

1. Log on to [www.sensorsystems.co.nz](http://www.sensorsystems.co.nz)
2. On the Home Page , Scroll down and Click on the **Lantern Selector Icon**

 <p><b>Airfield Lighting</b></p> <p>Complete Solar Powered Airfield Lighting Solutions from one of the Worlds leading Aviation Lighting solution manufacturers.</p>	 <p><b>Marine ATon Products</b></p> <p>Dense fog, high winds, seasonal ice, freezing rain, blizzards, and months without daylight - Carmanah Sabik LED marine lanterns perform year-in,...</p>	 <p><b>Obstruction Lighting</b></p> <p>Solar Powered Obstruction Lighting Products and Solutions. FAA and ICAO Compliant Obstruction Lighting Solutions for Crane, Obstruction, Tower and...</p>
<p> <b>ENQUIRE HERE</b></p>	<p> <b>OUR PRODUCTS</b></p>	<p> <b>LANTERN SELECTOR</b></p>
<p><b>Aquaculture Catalogue</b></p> <p>Carmanah &amp; Sabik's marine lanterns have proven their durability for over 30 years as navigation aids in the marine industry and are well suited for aquaculture use. Carmanah/Sabik has developed a variety of different aquaculture solutions. <a href="#">Click here</a> to download the Aquaculture catalogue.</p>	<p><b>M550 1-3 NM Self Contained Lantern</b></p> <p>The compact &amp; versatile M550 is up to 15 times brighter than its popular M502 predecessor and is available in 2 easy-mount designs for quick installation at ports, harbours, private docks and more. <a href="#">Click here</a> to find out more about the M550 and why it is so popular with so many New Zealand customers.</p>	<p><b>Full Product Catalogue</b></p> <p>Together Carmanah &amp; Sabik deliver one of the most comprehensive lines of marine lighting solutions in the world. Their joint global distribution network covering all the continents serves customers in all longitudes and latitudes. <a href="#">Click here</a> to view the Full Carmanah Sabik catalogue.</p>

Type your location in the “**Search Address**” field, and then click on “**Search**”

e.g. Papua New Guinea



[Home](#) [Contact Us](#)

## Marine Lantern Selector Tool

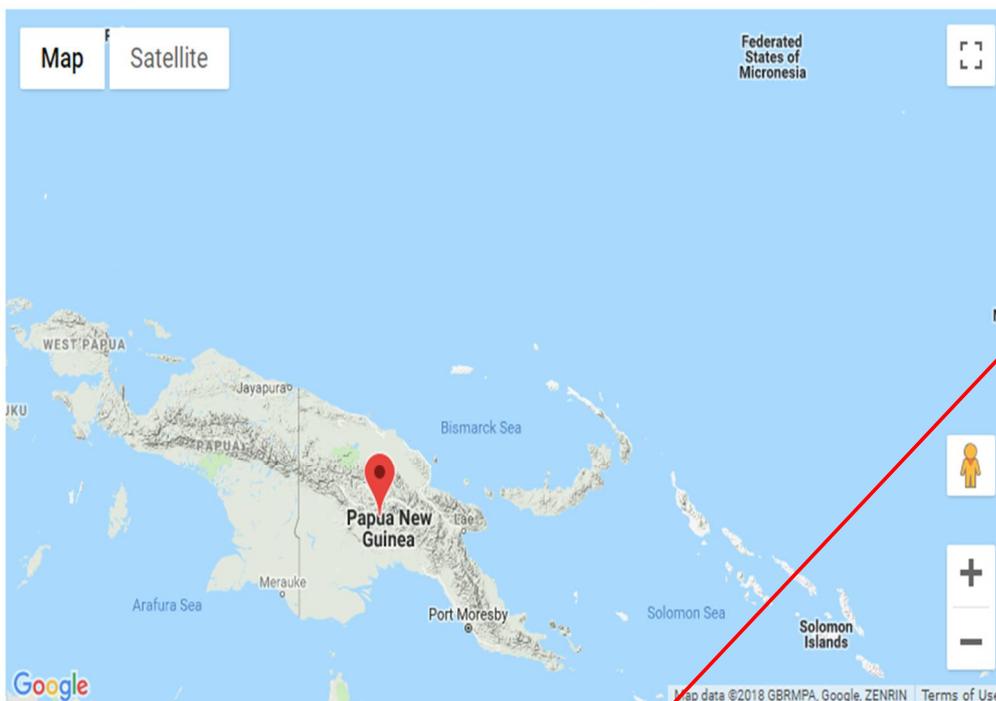
**Location** Click and drag the map marker to the location for your solar product. Or search for an address or postal code. When the marker is where you want it press Continue to return to the selector tool.

Search Address:

### Project Location

Latitude: -6.31  
Longitude: 143.96

Address: Southern Highlands  
Province, Papua  
New Guinea



Once this is entered click on “**Continue**”

You should now see your location on the screen

## Marine Lantern Selector Tool

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**Change Location**

Address: Southern Highlands Province, Papua New Guinea  
Latitude: -17.71 Longitude 178.07

Flash Character  Explain

Categories

Codes

GPS Flash Synchronization

Seek best performance, or

Select a target intensity or range

Range (NM)  nm  cd

Eff. Intensity (cd)

LED Colour:  

Transmissivity:

### M550

Setting	NA
Duty Cycle Limit	100%
Effective Intensity	12.6
Range (T=0.74)	2.8
Days of Autonomy	5.4
Minimum ALR	2.7

[print view](#)



### M650H

Setting	NA
Duty Cycle Limit	100%
Effective Intensity	22.6
Range (T=0.74)	3.4
Days of Autonomy	13.2
Minimum ALR	3.4

[print view](#)



### M660 Single

Setting	NA
Duty Cycle Limit	100%
Effective Intensity	23.9
Range (T=0.74)	3.5
Days of Autonomy	14.6
Minimum ALR	5.3

[print view](#)



### M660 Dual

Setting	NA
Duty Cycle Limit	100%
Effective Intensity	23.3
Range (T=0.74)	3.5
Days of Autonomy	29.1
Minimum ALR	5.3

[print view](#)



## We now need to enter the following inputs for your particular application:

- The **Flash Code** that the Lantern will be using
- The **Colour** of the Lantern
- The **TC factor** to be used ( use 0.74 or 0.80 and not 0.85)

So, for example, Code 066, Tc =0.80, Colour is White

we put solar to work **Marine Lantern Selector Tool**

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**Change Location**

Address: Suva, Fiji  
Latitude: -18.14 Longitude 178.44

Flash Character  Explain

Categories:  Single Flashing  
 06 : Fl 4s, 25%

Codes:  066 : Fl 4s, 25%

GPS Flash Synchronization

Seek best performance, or

Select a target intensity or range

Range (NM)  nm  cd

Eff. Intensity (cd)

LED Colour:

Transmissivity:

Include 500 Series

Model	Valid Config.	Sust-ainable	Intensity
M550	✓	✓	16.6
M502			

Include 600 Series

Model	Valid Config.	Sust-ainable	Intensity
M650	✓	✓	34.3
M650H	✓	✓	50.0

Include 800 Series

Model	Valid Config.	Sust-ainable	Intensity
M850 60X Standard	✓	✓	149.1
M850 60X Wide	✓	✓	128.2
M850 96E Standard	✓	✓	152.1
M850 96E Wide	✓	✓	120.8

M650	M650H	M850 60X Standard	M850 60X Wide
Setting "NA"	Setting "NA"	Setting "NA"	Setting "NA"
Duty Cycle Limit 100%			
Effective Intensity 34.3	Effective Intensity 50.0	Effective Intensity 149.1	Effective Intensity 128.2
Range (T=0.80) 4.4	Range (T=0.80) 4.9	Range (T=0.80) 6.9	Range (T=0.80) 6.6
Days of Autonomy 4.1	Days of Autonomy 4.9	Days of Autonomy 6.0	Days of Autonomy 6.0
Minimum ALR 1.3	Minimum ALR 1.6	Minimum ALR 1.0	Minimum ALR 1.0
<a href="#">print view</a>	<a href="#">print view</a>	<a href="#">print view</a>	<a href="#">print view</a>

[product page](#)

- Up to 44 candela IALA peak intensity
- up to 4-nautical miles
- Greater than 8° vertical divergence
- 169 mm ht. 176 mm dia.
- 1.58 kg
- GPS flash synchronization

[product page](#)

- Up to 60 candela IALA peak intensity
- over 4-nautical miles
- Greater than 8° vertical divergence
- 169 mm ht. 176 mm dia.
- 1.58 kg
- GPS flash synchronization

[product page](#)

- 8° Divergence
- Up to 7.5NM @ Tc=0.74
- Up to 387 cd
- 226 mm ht. 235 mm dia
- 4.5 kg
- Optional GPS Flash Synchronization
- Optional External Charge Port
- Optional External Gland (For an external PV connection)

[product page](#)

- 10° Divergence
- Up to 7.5NM @ Tc=0.74
- Up to 387 cd
- 226 mm ht. 235 mm dia
- 4.5 kg
- Optional GPS Flash Synchronization
- Optional External Charge Port
- Optional External Gland (For an external PV connection)

Once this has been entered, the software will calculate the options and display the suitable lantern/s and their specific information including Intensity, Range and Autonomy. There will usually be multiple options shown.

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**Change Location**

Address: Suva, Fiji  
Latitude: -18.14 Longitude 178.44

Flash Character  Explain  
 Categories: Common  
 Codes: 064 : Fl 4s, 12.5%

GPS Flash Synchronization  
 Seek best performance, or  
 Select a target intensity or range  
 Range (NM): 1 nm 1 cd  
 Eff. Intensity (cd)

LED Colour: White  
Transmissivity: 0.80

Model	Valid Config.	Sust-ainable	Intensity
M550			
M502			
<b>Include 600 Series</b>			
Model	Valid Config.	Sust-ainable	Intensity
M650	✓	✓	29.6
M650H	✓	✓	43.1
<b>Include 800 Series</b>			
Model	Valid Config.	Sust-ainable	Intensity
M850 60X Standard			244.9

M650	M650H	MB50 60X Standard	MB50 60X Wide
Setting "NA"	Setting "NA"	Setting "NA"	Setting "NA"
Duty Cycle Limit 100%	Duty Cycle Limit 100%	Duty Cycle Limit 100%	Duty Cycle Limit 100%
Effective Intensity 29.6	Effective Intensity 43.1	Effective Intensity 244.9	Effective Intensity 210.6
Range (T=0.80) 4.1	Range (T=0.80) 4.7	Range (T=0.80) 7.9	Range (T=0.80) 7.6
Days of Autonomy 8.2	Days of Autonomy 9.7	Days of Autonomy 6.0	Days of Autonomy 6.0
Minimum ALR 1.9	Minimum ALR 2.2	Minimum ALR 1.0	Minimum ALR 1.0
<a href="#">print view</a>	<a href="#">print view</a>	<a href="#">print view</a>	<a href="#">print view</a>
<a href="#">product page</a>	<a href="#">product page</a>	<a href="#">product page</a>	<a href="#">product page</a>
<ul style="list-style-type: none"> <li>Up to 44 candela IALA peak intensity</li> <li>up to 4-nautical miles</li> <li>Greater than 8° vertical divergence</li> <li>169 mm ht. 176 mm dia.</li> <li>1.58 kg</li> <li>GPS flash synchronization</li> </ul>	<ul style="list-style-type: none"> <li>Up to 60 candela IALA peak intensity</li> <li>over 4-nautical miles</li> <li>Greater than 8° vertical divergence</li> <li>169 mm ht. 176 mm dia.</li> <li>1.58 kg</li> <li>GPS flash synchronization</li> </ul>	<ul style="list-style-type: none"> <li>8° Divergence</li> <li>Up to 7.5NM @ Tc=0.74</li> <li>Up to 387 cd</li> <li>226 mm ht. 235 mm dia</li> <li>4.5 kg</li> <li>Optional GPS Flash Synchronization</li> <li>Optional External Charge Port</li> <li>Optional External Gland (For an external PV connection)</li> </ul>	<ul style="list-style-type: none"> <li>10° Divergence</li> <li>Up to 7.5NM @ Tc=0.74</li> <li>Up to 387 cd</li> <li>226 mm ht. 235 mm dia</li> <li>4.5 kg</li> <li>Optional GPS Flash Synchronization</li> <li>Optional External Charge Port</li> <li>Optional External Gland (For an external PV connection)</li> </ul>

Click arrows to move to next screens to display more options

See below for further options for same input data:

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**Change Location**

Address: Suva, Fiji  
Latitude: -18.14 Longitude 178.44

Flash Character  Explain

Categories: Common

Codes: 064 : Fl 4s, 12.5%

GPS Flash Synchronization

Seek best performance, or

Select a target intensity or range

Range (NM): 1 nm 1 cd

Eff. Intensity (cd)

LED Colour: White

Transmissivity: 0.80

Include 500 Series			
Model	Valid Config.	Sust-ainable	Intensity
M550			
M502			

Include 600 Series			
Model	Valid Config.	Sust-ainable	Intensity
M650	✓	✓	29.6
M650H	✓	✓	43.1

Include 800 Series			
Model	Valid Config.	Sust-ainable	Intensity
M850 50X Standard			244.0

MB50 96E Standard	MB50 96E Wide	MB60 96E Standard	MB60 96E Wide
Setting "NA"	Setting "NA"	Setting "NA"	Setting "NA"
Duty Cycle Limit 100%			
Effective Intensity 244.9	Effective Intensity 210.6	Effective Intensity 321.5	Effective Intensity 274.7
Range (T=0.80) 7.9	Range (T=0.80) 7.6	Range (T=0.80) 8.5	Range (T=0.80) 8.1
Days of Autonomy 9.5	Days of Autonomy 9.5	Days of Autonomy 4.9	Days of Autonomy 4.9
Minimum ALR 1.0	Minimum ALR 1.0	Minimum ALR 1.0	Minimum ALR 1.0
<a href="#">print view</a>	<a href="#">print view</a>	<a href="#">print view</a>	<a href="#">print view</a>

MB50 96E Standard	MB50 96E Wide	MB60 96E Standard	MB60 96E Wide
8° Divergence	10° Divergence	8° Divergence	10° Divergence
Up to 7.5NM @ Tc=0.74	Up to 7.5NM @ Tc=0.74	Up to 7.8NM @ Tc=0.74	Up to 7.8NM @ Tc=0.74
Up to 387 cd	Up to 387 cd	Up to 475 cd	Up to 475 cd
226 mm ht. 235 mm dia	226 mm ht. 235 mm dia	328 mm ht. 235 mm dia	328 mm ht. 235 mm dia
5.3 kg	5.3 kg	6.4 kg	6.4 kg
Optional GPS Flash Synchronization			
Optional External Charge Port			
Optional External Gland (For an external PV connection)	Optional External Gland (For an external PV connection)	Optional External Gland (For an external PV connection)	Optional External Gland (For an external PV connection)

Note changed information – higher level options

So, let's see what happens if we **change the Lantern Colour** from **WHITE** to **RED**. ALL other factors remain the same:

Note changed information:

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**Change Location**

Address: Suva, Fiji  
Latitude: -18.14 Longitude 178.44

Flash Character  Explain

Categories: Common  
064 : Fl 4s, 12.5%

Codes: 064 : Fl 4s, 12.5%

GPS Flash Synchronization

Seek best performance, or

Select a target intensity or range

Range (NM): 1 nm 1 cd

Eff. Intensity (cd)

LED Colour: Red

Transmissivity: 0.80

Model	Valid Config.	Sust-ainable	Intensity
M550			
M502			
<b>Include 600 Series</b>			
Model	Valid Config.	Sust-ainable	Intensity
M650	✓	✓	17.9
M650H	✓	✓	21.9
<b>Include 800 Series</b>			
Model	Valid Config.	Sust-ainable	Intensity
M850 60X Standard			184.9
M850 60X Wide			156.6

M650	M650H	M850 60X Standard	M850 60X Wide
Setting "NA"	Setting "NA"	Setting "NA"	Setting "NA"
Duty Cycle Limit 100%	Duty Cycle Limit 100%	Duty Cycle Limit 100%	Duty Cycle Limit 100%
Effective Intensity 17.9	Effective Intensity 21.9	Effective Intensity 184.9	Effective Intensity 156.6
Range (T=0.80) 3.5	Range (T=0.80) 3.7	Range (T=0.80) 7.3	Range (T=0.80) 7.0
Days of Autonomy 8.9	Days of Autonomy 13.2	Days of Autonomy 4.6	Days of Autonomy 4.6
Minimum ALR 2.0	Minimum ALR 3.1	Minimum ALR 1.0	Minimum ALR 1.0
<a href="#">print view</a>	<a href="#">print view</a>	<a href="#">print view</a>	<a href="#">print view</a>
<a href="#">product page</a>	<a href="#">product page</a>	<a href="#">product page</a>	<a href="#">product page</a>
<ul style="list-style-type: none"> <li>Up to 44 candela IALA peak intensity</li> <li>up to 4-nautical miles</li> <li>Greater than 8° vertical divergence</li> <li>169 mm ht. 176 mm dia.</li> <li>1.58 kg</li> <li>GPS flash synchronization</li> </ul>	<ul style="list-style-type: none"> <li>Up to 60 candela IALA peak intensity</li> <li>over 4-nautical miles</li> <li>Greater than 8° vertical divergence</li> <li>169 mm ht. 176 mm dia.</li> <li>1.58 kg</li> <li>GPS flash synchronization</li> </ul>	<ul style="list-style-type: none"> <li>8° Divergence</li> <li>Up to 7.5NM @ Tc=0.74</li> <li>Up to 387 cd</li> <li>226 mm ht. 235 mm dia</li> <li>4.5 kg</li> <li>Optional GPS Flash Synchronization</li> <li>Optional External Charge Port</li> <li>Optional External Gland (For an external PV connection)</li> </ul>	<ul style="list-style-type: none"> <li>10° Divergence</li> <li>Up to 7.5NM @ Tc=0.74</li> <li>Up to 387 cd</li> <li>226 mm ht. 235 mm dia</li> <li>4.5 kg</li> <li>Optional GPS Flash Synchronization</li> <li>Optional External Charge Port</li> <li>Optional External Gland (For an external PV connection)</li> </ul>

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**Change Location**

Address: Suva, Fiji  
Latitude: -18.14 Longitude 178.44

Flash Character  Explain

Categories

Codes

GPS Flash Synchronization

Seek best performance, or

Select a target intensity or range

Range (NM)

Eff. Intensity (cd)

LED Colour:

Transmissivity:

Model	Valid Config.	Sust-ainable	Intensity
<b>Include 500 Series</b>			
M550			
M502			
<b>Include 600 Series</b>			
M650	✓	✓	17.9
M650H	✓	✓	21.9
<b>Include 800 Series</b>			
M850 60X Standard	✓	✓	184.9

Product	Setting	Duty Cycle Limit	Effective Intensity	Range (T=0.80)	Days of Autonomy	Minimum ALR
M850 96E Standard <td>"NA"</td> <td>100%</td> <td>184.9</td> <td>7.3</td> <td>7.4</td> <td>1.0</td>	"NA"	100%	184.9	7.3	7.4	1.0
M850 96E Wide <td>"NA"</td> <td>100%</td> <td>156.6</td> <td>7.0</td> <td>7.4</td> <td>1.0</td>	"NA"	100%	156.6	7.0	7.4	1.0
M860 96E Standard <td>"NA"</td> <td>100%</td> <td>184.9</td> <td>7.3</td> <td>4.9</td> <td>1.0</td>	"NA"	100%	184.9	7.3	4.9	1.0
M860 96E Wide <td>"NA"</td> <td>100%</td> <td>156.6</td> <td>7.0</td> <td>4.9</td> <td>1.0</td>	"NA"	100%	156.6	7.0	4.9	1.0



[product page](#)

- 8° Divergence
- Up to 7.5NM @ Tc=0.74
- Up to 387 cd
- 226 mm ht. 235 mm dia
- 5.3 kg
- Optional GPS Flash Synchronization
- Optional External Charge Port
- Optional External Gland (For an external PV connection)



[product page](#)

- 10° Divergence
- Up to 7.5NM @ Tc=0.74
- Up to 387 cd
- 226 mm ht. 235 mm dia
- 5.3 kg
- Optional GPS Flash Synchronization
- Optional External Charge Port
- Optional External Gland (For an external PV connection)



[product page](#)

- 8° Divergence
- Up to 7.8NM @ Tc=0.74
- Up to 475 cd
- 328 mm ht. 235 mm dia
- 6.4 kg
- Optional GPS Flash Synchronization
- Optional External Charge Port
- Optional External Gland (For an external PV connection)



[product page](#)

- 10° Divergence
- Up to 7.8NM @ Tc=0.74
- Up to 475 cd
- 328 mm ht. 235 mm dia
- 6.4 kg
- Optional GPS Flash Synchronization
- Optional External Charge Port
- Optional External Gland (For an external PV connection)

Red Colour gives a lower range than White.

You can alter the information and see the results that this gives.

However, we strongly recommend that you consult with us BEFORE you purchase any lantern to confirm your requirements for your application.

## **So how do you decide which Lantern to select?**

As there are often range of options, it is sometimes unclear as to which is the best.

However, some factors to consider are:

1. What application will the lantern be used for – Buoy, fixed structure etc
2. Autonomy factor – the greater the autonomy the longer the battery will provide power in low light conditions
3. Will the lantern be re-deployed at a later stage
4. Power supply – Self Contained or require external power – AC or Solar
5. Cost of lanterns

To help you decide these factors, please contact Sensor Systems (NZ) Ltd and we will be happy to help

### **Please Contact us on:**

Phone: (09) 275-4578

Email: [info@sensorsystems.co.nz](mailto:info@sensorsystems.co.nz)

Web: [www.sensorsystems.co.nz](http://www.sensorsystems.co.nz)