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PRODUCT CONFIGURATION

Required Options:

☐ GPS
 ☐ AIS-CT1
 ☐ AIS-CT2
 ☐ AIS-MT1
 ☐ AIS-MT2
 ☐ Bluetooth
 ☐ Satellite

Night LED Colour:

Red

Flash Code:

FL 50

Operational Mode:

Duck-Til-Down

Calculation Mode:

Standard

Intensity step:

100

Transmissivity:

0.7411

Change Location

Location: Melbourne City (Lat: -37.827/Lng: 144.953)

PRODUCT CONFIGURATION

Product:

SL-C415 with 10W booster

LED Colour:

Red

Calculation Mode:

Standard

Solar Booster:

10 Watt

Flash Code:

FL 50

Night Intensity step:

100

Operational Mode:

Duck-Til-Down

Transmissivity:

0.7411

Background Lighting:

None

GPS

AIS

Change Location

Location: Melbourne City (Lat: -37.827/Lng: 144.953)

[Advanced](#)
[Parameter Definitions](#)

RESULTS

AUTONOMY

Average Autonomy

: 63.8 Days

Minimum Autonomy

: 51.7 Days

Best Autonomy

: 77.7 Days

INTENSITY

Night Effective Intensity

: 56.5 cd

Night Peak Intensity

: 79.1 cd

RANGE

Maximum Night Range

: 4.5 NM

SOLAR PANEL

Optimal Tilt

: 61.8°

Selected configuration is suitable.

Charge-Status

Autonomy and Intensity Compared

Worldwide

+61 (0)3 5977 6128

Asia

+65 (0) 4829 2243

UK

+44 (0)1502 588026

USA & Canada

+1 (800) 737 1311

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Sealite Online Solar Calculator Quick Start Guide

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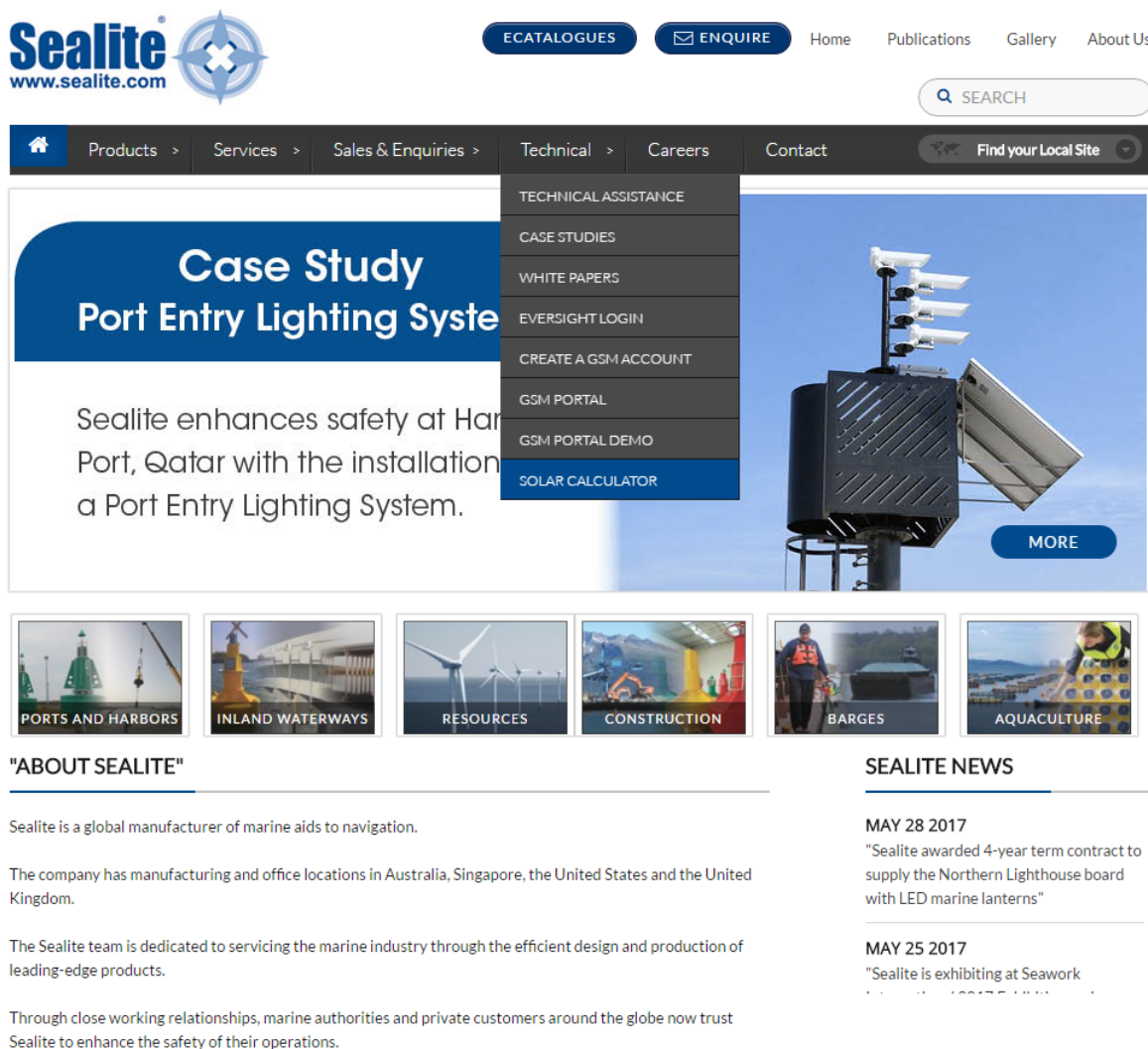
Introduction

The Sealite Online Solar Calculator is provided to all users to assist in the correct selection and viability of a certain product for their area.

Accessing the Online Solar Calculator

To access the Sealite online solar calculator for assisting with product selection, or performing a detailed solar viability analysis, follow these steps.

1. Go to www.sealite.com on the internet,
2. Select the Technical tab,
3. Select the Solar Calculator Tab.



The screenshot shows the Sealite website homepage. The top navigation bar includes links for ECATALOGUES, ENQUIRE, Home, Publications, Gallery, and About Us. A search bar is located on the right. Below the navigation bar, a dropdown menu is open under the 'Technical' tab, listing various options: TECHNICAL ASSISTANCE, CASE STUDIES, WHITE PAPERS, EVERSIGHT LOGIN, CREATE A GSM ACCOUNT, GSM PORTAL, GSM PORTAL DEMO, and SOLAR CALCULATOR (which is highlighted in blue). The main content area features a 'Case Study Port Entry Lighting System' with a description: 'Sealite enhances safety at Har Port, Qatar with the installation a Port Entry Lighting System.' To the right of the case study is a large image of a port entry lighting system with a 'MORE' button. Below the main content area are six smaller images representing different sectors: PORTS AND HARBORS, INLAND WATERWAYS, RESOURCES, CONSTRUCTION, BARGES, and AQUACULTURE. At the bottom, there are two sections: 'ABOUT SEALITE' and 'SEALITE NEWS'. The 'ABOUT SEALITE' section contains three paragraphs of text. The 'SEALITE NEWS' section contains two news items dated MAY 28 2017 and MAY 25 2017.

Sealite
www.sealite.com

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Case Study
Port Entry Lighting System

Sealite enhances safety at Har Port, Qatar with the installation a Port Entry Lighting System.

TECHNICAL ASSISTANCE
CASE STUDIES
WHITE PAPERS
EVERSIGHT LOGIN
CREATE A GSM ACCOUNT
GSM PORTAL
GSM PORTAL DEMO
SOLAR CALCULATOR

PORTS AND HARBORS **INLAND WATERWAYS** **RESOURCES** **CONSTRUCTION** **BARGES** **AQUACULTURE**

"ABOUT SEALITE"

Sealite is a global manufacturer of marine aids to navigation.

The company has manufacturing and office locations in Australia, Singapore, the United States and the United Kingdom.

The Sealite team is dedicated to servicing the marine industry through the efficient design and production of leading-edge products.

Through close working relationships, marine authorities and private customers around the globe now trust Sealite to enhance the safety of their operations.

SEALITE NEWS

MAY 28 2017
"Sealite awarded 4-year term contract to supply the Northern Lighthouse board with LED marine lanterns"

MAY 25 2017
"Sealite is exhibiting at Seawork"

Figure 1

4. A pop-up will display asking you if you need help in deciding, or if you know your product.

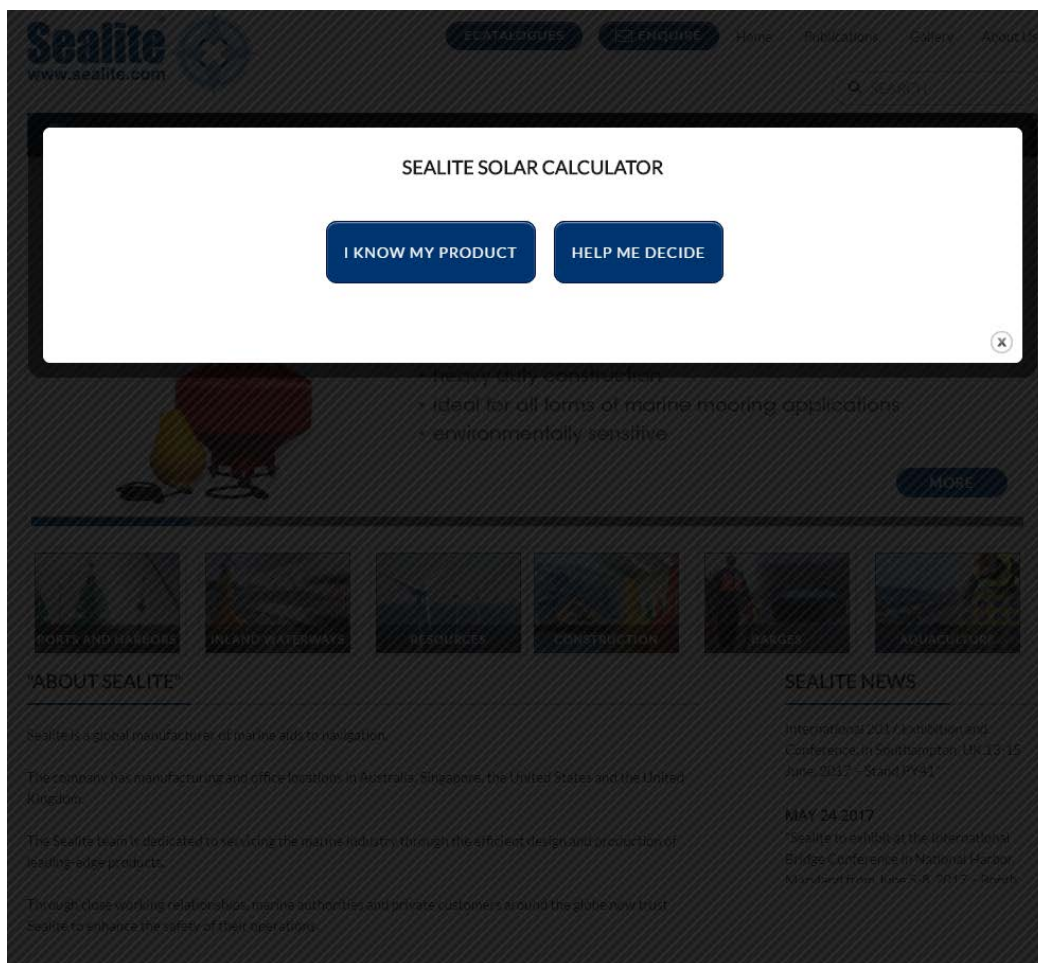


Figure 2

6. Select the Appropriate choice.

Help Me Decide

If you are unsure if which product will meet your needs, you can choose the “Help Me Decide” option of the Pop-up menu. This section will provide a list of suitable products that will work in the chosen area and configuration.

The first selection that you will be presented with is the Location selection. You will be presented with a Map, where you can either:

1. Pan and zoom to find your location
2. Type in the location Name, or Co-Ordinate Data in the search box and press search
3. Use the current location provided by your Internet service provider/device

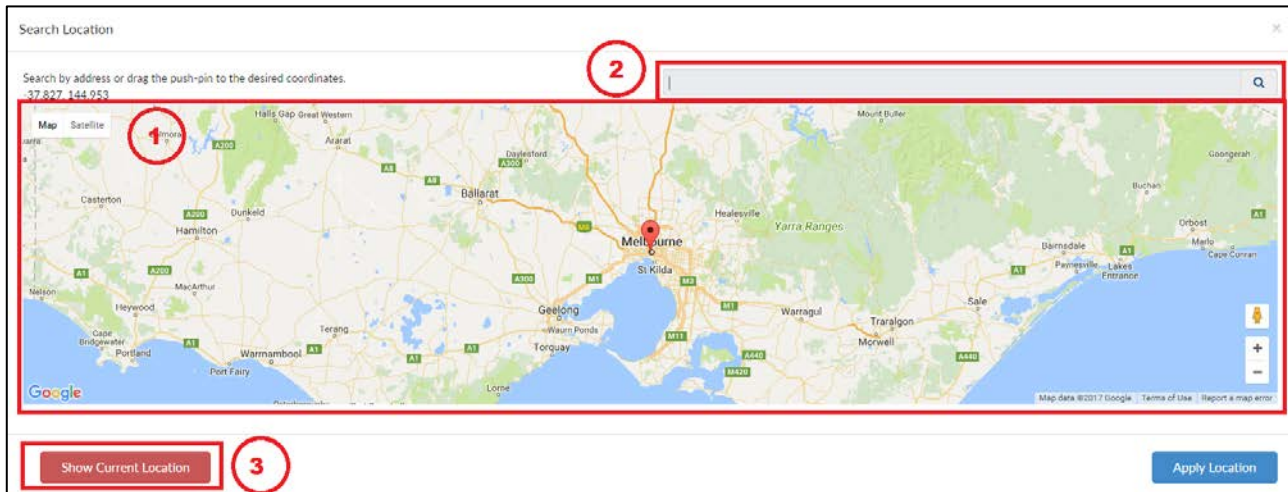


Figure 3

Once you have found your location, press the apply location the system will calculate and present all viable lanterns for the given location with some default selection parameters. On completion, a list will be returned as Figure 4. Please note due to the complexity of the calculations, this can take some time.








PRODUCT CONFIGURATION					
Required Options: <input type="checkbox"/> GPS <input type="checkbox"/> GSM <input type="checkbox"/> RF <input type="checkbox"/> Bluetooth <input type="checkbox"/> Satellite		<input type="checkbox"/> AIS-CT1 <input type="checkbox"/> AIS-CT3 <input type="checkbox"/> AIS-MT1 <input type="checkbox"/> AIS-MT3		Night LED Colour: <input type="text" value="Red"/> Flash Code: <input type="text" value="FL 55"/> Operational Mode: <input type="text" value="Dusk-Till-Dawn"/>	
		Calculation Mode: <input type="text" value="Standard"/> Intensity step: <input type="text" value="100"/> % Transmissivity: <input type="text" value="0.7411"/> Background Lighting: <input type="text" value="None"/>			
<input type="button" value="Change Location"/>		Location: Melbourne City (Lat: -37.827;Lng: 144.953)		<input type="button" value="Parameter Definitions"/>	
RESULT					
Product	Description	Eff. Intensity	Range	Autonomy	
	SL-15 The SL-15 is a compact 1-2NM LED light and provides exceptional value and light efficiency and incorporates some of the most advanced technology available.	6.6	2.2	19	Details
	SL-BR (7.5Ah,10W) The SL-BR is an LED bridge light designed to offer superior visibility up to 4NM, and operates in conjunction with existing power supplies. Its specifically designed to clearly mark bridges and structures extending over navigable waterways.	12.9	2.8	48	Details
	SL-BR (two lights) CT1 The SL-BR is an LED bridge light designed to offer superior visibility up to 4NM, and operates in conjunction with existing power supplies. Its specifically designed to clearly mark bridges and structures extending over navigable waterways.	12.9	2.8	84	Details
	SL-BR (two lights) CT2 The SL-BR is an LED bridge light designed to offer superior visibility up to 4NM, and operates in conjunction with existing power supplies. Its specifically designed to clearly mark bridges and structures extending over navigable waterways.	12.9	2.8	355	Details
	SL-60 The SL60 is a popular and versatile 2 - 3NM+ solar marine lantern, with an Ultra-high intensity LED that is ideal for navigation, hazard lighting, aquaculture, perimeter lighting and a range of other applications.	17.6	3.1	40	Details
	SL-70 The SL-70 is a 2-3NM+ high-performance solar marine lantern, with two internal solar modules designed to provide exceptional charging and operate reliably in low sunlight conditions.	17.6	3.1	81	Details
	SL-07-SL-C500 The SL-07-C500 is a 1 - 5 Nm LED marine lantern designed to offer superior visibility and is paired with a UV stabilised chassis containing 4 premium grade 10 watt solar modules, designed to collect sunlight at all angles	56.5	4.5	118	Details

Figure 4

You can now use the product configuration section to input your desired configuration. In the product configuration area, you will have the ability to change the following options:

REQUIRED OPTION'S

Currently many Sealite products support one or more of the following options.

- GPS Synchronisation
- GSM Control & Monitoring
- RF Control
- Bluetooth Control
- Satellite Monitoring
- AIS

Please speak to your local Sealite sales representative for more information about the optional extra's.

LED COLOUR

This will be populated with a list of standard lantern colours.

FLASH CODE

This is a dropdown of the common Sealite flash codes. The selection has been broken down into two dropdowns, the first dropdown contains the flash code, the second the flash character.

OPERATIONAL MODE

This field displays the typical operational modes used by Sealite:

- Dusk-till-Dawn
- Always On
- Standby

CALCULATION MODE

The Solar Calculator support three calculation modes:

- Standard
- Range
- Intensity

The default mode is Standard.

Not all lanterns support setting the range and intensity via the Sealite Lantern Config Tool. Please review the product specific installation manual for more information.

Standard

In Standard mode, the lantern will provide the Effective Intensity and Range based on the selected Flash Code, Transmissivity and Lantern power selected in the selection Combo box. The selection dropdown box, will be populated with the following values:

- 25
- 50
- 75
- 100

The default option shall be 100.

Range

In range mode, the user can select a desired target range that has been populated in the selection dropdown box. The selection dropdown box will have pre-selected ranges up to the Lanterns Maximum.

Intensity

In "Intensity" mode the user can enter in a desired Effective Intensity in Candela. The selection dropdown box will have pre-selected Intensities up to the Lanterns Maximum.

Transmissivity

This will be populated with the following transmissivity options:

- 0.68
- 0.7411
- 0.85

The default option selected is 0.7411.

Background Lighting

This will be populated with the following Background Lighting options:

- NONE
- MINOR
- MAJOR

The default option selected is NONE.

RESULTS

Changing any of the Production Configuration Settings will result in an immediate update of the results table. The result table will **only** show lanterns that are viable for that area with the selected configuration.

The product results list contains the following fields:

- Product Image
- Product Name
- Product Description
- Effective Intensity
- Range
- Minimum Autonomy
- Detail Hyperlink

List ordering

The results list is by default ordered by minimum range to maximum range, however you can re-order the list by clicking on the headers (except for the description header).


RESULT					
	Product	Description	Eff. Intensity	Range	Autonomy
	SL-15	The SL-15 is a compact 1-2NM LED light and provides exceptional value and light efficiency and incorporates some of the most advanced technology available.	6.6	2.2	19
					Details

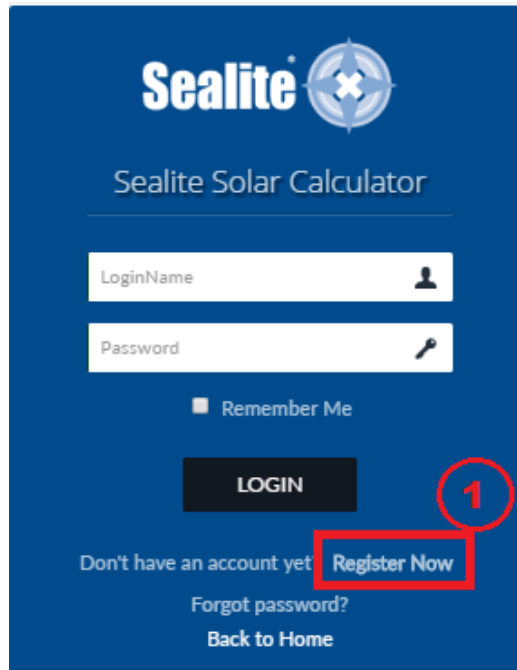
Figure 5

The details link will redirect you to the product page for more information regarding the lantern.

I know My Product

If you know which product you would like to deploy, but would like to perform a more detailed solar calculation, you can choose the “I know My Product” option of the Pop-up menu. This section presents a more detailed solar calculation for the chosen product, configuration and selected area.

If this is the first time you are browsing to the site, it will present you with a log in screen:



The image shows the Sealite Solar Calculator login interface. It features the Sealite logo at the top, followed by the title "Sealite Solar Calculator". Below this are two input fields: "LoginName" with a user icon and "Password" with a key icon. A "Remember Me" checkbox is positioned below the password field. A prominent black "LOGIN" button is centered. To the right of the login button, a red circle with the number "1" highlights the "Register Now" link. Below the login button, there are links for "Don't have an account yet?", "Forgot password?", and "Back to Home".

Figure 6

If you do not have user credentials, then you can register as a new user by clicking on the “Register Now” link. This will the guide you through the registration process.



The image shows the Sealite Solar Calculator registration interface. It features the Sealite logo at the top, followed by the title "Sealite Solar Calculator". Below this are several input fields: "Name", "Surname", "Email", "Contact Number", "Company", and a dropdown menu labeled "Please Select". A prominent black "REGISTER NOW" button is centered. Below the registration button, there are links for "Already have an account? Sign In Now" and "Back to Home".

Figure 7

Every field in the Registration Screen is compulsory and needs to be completed with correct data. Once completed click the “REGISTER NOW” button.

The system will send an email confirming registration and providing the password for access.

You can log in to the solar calculator using the email and password provided in the confirmation email.

DISCLAIMER

Once you are logged in and have selected the desired location, you will be presented with a Disclaimer. By accepting the disclaimer, you agree to the terms of the disclaimer. If you do not agree to the disclaimer, you will be redirected to the Pop-up prompt, where you can make another selection.

MAP

Once you are logged in, you will be presented with the Location selection. You will be presented with a Map, where you can either:

1. Pan and zoom to find your location
2. Type in the location Name, or Co-Ordinate Data in the search box and press search
3. Use the current location provided by your Internet service provider/device

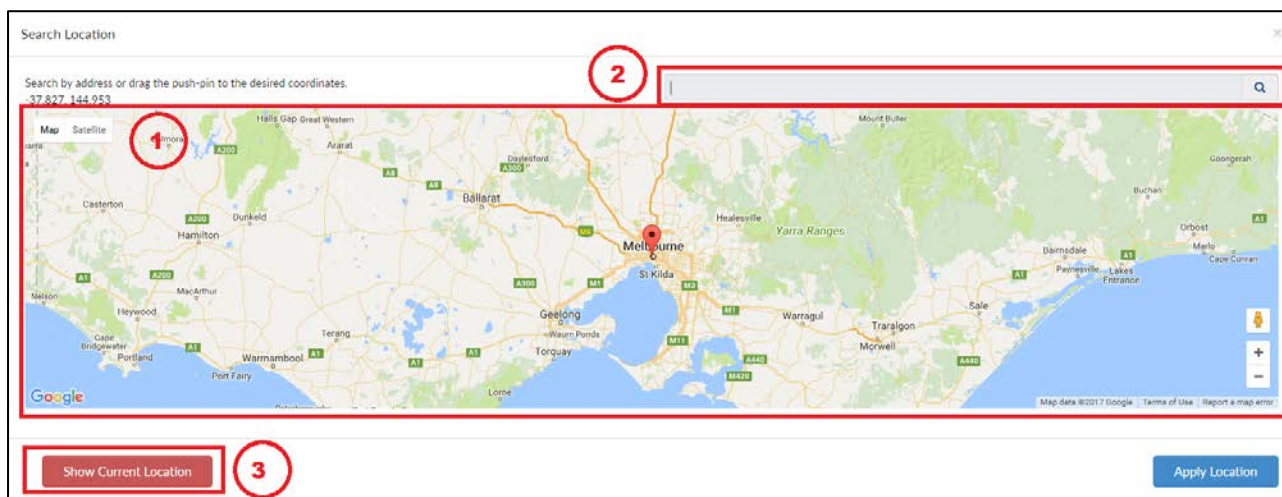


Figure 8

PRODUCT CONFIGURATION

You will now be presented with a product configuration screen, where you can select the following:

- Product Selection
- Battery Capacity Selection
- Solar Panel selection
- Solar booster
- Optional Extra Selection (GPS, GSM, etc.. If supported by the product)
- LED Colour
- Flash code
- Operational Mode
 - Dusk-till-Dawn
 - Always On
 - Day & Night (if Supported by Product)
 - Standby
- Calculation Mode
 - Standard
 - Range

- Intensity
- Transmissivity
 - Background Lighting

Figure 9

Product Selection

This dropdown box will contain a list of lanterns that are available for solar calculation. By selecting a product, the other fields will automatically update with the lantern specific data.

If a particular field is not displayed, that means the lantern does not support modification of that field.

Battery Capacity

This field will be populated with all available battery options that this product supports. It will only be displayed if the product has two or more battery options to choose from, otherwise it is not visible

Solar Panel

This field will be populated with all available solar panel options that this product supports. It will only be displayed if the product has two or more solar panel options to choose from, otherwise it is not visible.

Solar Booster

If the product supports the connection of a solar booster, then this field will be visible. The field will have the available solar booster configurations presented in the dropdown list.

Optional Extra's

This will denote the available options the product has. If the product does not have one of the options, it will not be displayed. Also, if the product has an optional extra set as default, the check box will be checked and marked as read-only, and cannot be changed by the user.

LED Colour

This will be populated with a list of available colours for the product selected. For instance, if the product only comes in Red and Blue, then the dropdown box will have two values loaded into them, namely Red and Blue.

Flash Code

This is a dropdown of the common Sealite flash codes. The selection has been broken down into two dropdowns, the first dropdown contains the flash code, the second the flash character.

Operational Mode

This field displays the supported operational modes of the lantern:

- Dusk-till-Dawn
- Always On
- Standby

Calculation Mode

The Solar Calculator support three calculation modes:

- Standard
- Range
- Intensity

The default mode is Standard.

Not all lanterns support setting the range and intensity via the Sealite Lantern Config Tool. Please review the product specific installation manual for more information.

Standard Mode

In Standard mode, the lantern will provide the Effective Intensity and Range based on the selected Flash Code, Transmissivity and Lantern power selected in the selection Combo box. The selection dropdown box, will be populated with the following values:

- 25
- 50
- 75
- 100

The default option shall be 100.

Range

In range mode, the user can select a desired target range that has been populated in the selection dropdown box. The selection dropdown box will have pre-selected ranges up to the Lanterns Maximum.

Intensity

In "Intensity" mode the user can enter in a desired Effective Intensity in Candela. The selection dropdown box will have pre-selected Intensities up to the Lanterns Maximum.

Transmissivity

This will be populated with the following transmissivity options:

- 0.68
- 0.7411
- 0.85

The default option selected is 0.7411.

Background Lighting

This will be populated with the following Background Lighting options:

- NONE
- MINOR
- MAJOR

The default option selected is NONE.

RESULTS

The results section includes the following fields:

1. Autonomy (in Days - d)
 - a. Average
 - b. Minimum
 - c. Maximum
2. Intensity (In Candela - cd)

- a. Effective
 - b. Peak
3. Range (In Nautical Miles - NM)
4. Solar Booster. (Only visible if product Supports this)
5. Result Verdict:
 - a. Green for Suitable
 - b. Orange for Marginal
 - c. Red for Not Suitable
6. Charge Graph
7. Autonomy Graph
8. Charge Graph

Result Verdict

The solar calculation will provide a recommendation regarding the viability of the product for the selected location and configuration. The options are:

1. Green for Suitable
2. Orange for Marginal
3. Red for Not Suitable

Green

The Solar product is viable and will work in the selected area and configuration.

Orange

The Product may work in the area but has limited autonomy

Red

The product will not work in the selected area and configuration

Sealite Online Solar Calculator Disclaimer

The Solar Calculator is the intellectual property of Sealite Pty Ltd. The information contained herein is available to authorized users.

Sealite has made every attempt to ensure the accuracy and reliability of the information provided on this website. However, the information is provided "as is" without warranty of any kind. Sealite does not accept any responsibility or liability for the accuracy, suitability or reliability of the information contained on this website. Any reliance you place on such material is therefore strictly at your own risk.

As each installation location is unique and radiation data may vary due to local and climatic conditions, the user should establish fitness of purpose before installing the light fixture.

Other Sealite Products Available



**Marine Lanterns
(1–19NM)**



**Monitoring &
Control Systems**



Bridge & Barge Lights



**Marine Buoys
(up to 3mt in diameter)**



Area Lighting



**Mooring Systems &
Accessories**