LED Light Source and Controller

SL-LED Series for rotating or fixed lenses

Standard
- PC Configuration Tool
- RS232/422/485 Port
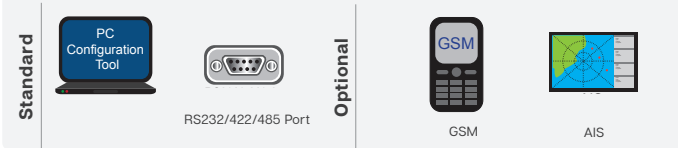
Optional
- GSM
- AIS

The SL-LED Series are revolutionary solid-state light sources designed to replace traditional lamps in classical lighthouse optics.

Their long life and high luminous efficiency delivers huge energy savings and reduces the frequency of maintenance for lighthouse operators. Most importantly, by retaining the original lens, these sites can maintain their heritage value.

Continuous or Flashing Operation

Capable of either of these functions, the SL-LED series is suitable for use in revolving or fixed optics. Their crisp, white light improves conspicuity in light polluted areas while in flashing mode, it instantly provides an 'eye-catching' sharp flash at full brilliance.

Low Power and Low Voltage DC

The SL-LED Series is well suited to battery and renewable energy power sources, such as solar photovoltaic. This helps to improve efficiency, reduces running costs and lessen it's carbon footprint. The universal controller provided can accommodate a wide range of power supply choices, operating modes and power levels.

Universal LED Controller

The LED Light Source is used in conjunction with Sealite's Universal LED Controller and PC Configuration Tool. The controller can deliver power up to 200 watts and provides a range of features. These include advanced monitoring capabilities to monitor conditions such as LED status, power supply and turntable rotation speed. The Controller also allows advanced programming features to be configured, including intensity settings, flash character and a selection of alarm conditions.

Sealite Consulting Service

A consultative service is provided to survey the lighthouse either on site or recommendations can be prepared in consultation based on photographs and details drawings of the lens. Sealite has been involved in light house restorations globally since 2013 with the expertise to tailor the solution to each individual site.

Features

- High intensity LED array
- Anodised heat sinks to maintain temperature of LED's
- PC Configuration Tool for programming the light
- GPS Antenna
- Built in GSM
- Built in AIS Type 1 and Type 3
- 110/240V supply options

High Performance

- Advanced Monitoring
- Advanced Programming
- 10 year expected lifetime on LED's
- Independent driver outputs for redundancy
- Sealite consultancy service to prepare tailored site recommendations

Cost Effective

- Low maintenance costs
- Energy efficient light solution

Compliance

- IALA

Optional

- GSM
- AIS
- GPS Antenna

Technical Specifications·*

Light Source Characteristics	SL-LED LIGHT SOURCE	
	SL-LED 324S	SL-LED 324
Maximum Power Rating (W)	Variable up to 200W	Variable up to 200W
Number of LEDs in Array	36	36
LED Height (cm)	1.2	1.6
Average LED Width	1.89	2.57
LED Area (cm²)	2.27	4.11
Average Horizontal Intensity (cd)	2642	2499
Nominal Average Luminance (cd/cm²)	1165	608

Please note: The quoted figures above are for peak outputs when operating at 100% intensity. The maximum recommended power duty cycle including flash character is 50% for low to moderate temperature environments (up to 40°C / 104°F). The system includes thermal monitoring of the light source and controller.

Controller Characteristics	SL-LED CONTROLLER
	SL-LED-CTRL
Available Flash Characteristics	Up to 310 including 256 IALA recommended
Intensity Adjustments	User adjustable
Electrical Characteristics	
Circuit Protection	Polarity protected
Nominal Voltage	VDC Model: 18–32VDC VAC Model: 110–240VAC
Temperature Range	-40 to 60°C
External 3rd Party Monitoring	Via RS232/422/485
AIS Connection	Via RS232/422/485 (if built-in module not selected)
Alarm Contacts	1 x Volt free 250VAC @ 5A or 30VDC @ 5A
External Inputs	2 x general purpose digital inputs 3–24VDC
External Outputs	2 x general purpose digital outputs will switch up to 24VDC @ 1A
Physical Characteristics	
Body Material	Baked enamel coated aluminium
Mounting	4 x 6mm screws (preferred mounting landscape)
Height (mm/inches)	111 / 4½
Width (mm/inches)	400 / 15¾
Depth (mm/inches)	230 / 9
Weight (kg/lbs)	5 / 11
Product Life Expectancy	Up to 12 years
Environmental Standards	
Low Temperature	MIL-STD-810G Method 502.5
High Temperature	MIL-STD-810G Method 501.5
Humidity	0 – 100%, condensing
Certifications	
CE & Electrical	EN61000-6-2:2005, IEC61000-4-2:2008, IEC61000-4-3:2010, IEC61000-6-1:2016
Quality Assurance	ISO9001:2015
Waterproof	IP67
Intellectual Property	
Trademarks	SEALITE® is a registered trademark of Sealite Pty Ltd
Warranty *	3 years
Options Available	• AIS Type 1 or Type 3 • GSM Monitoring & Control System • Solar Power • Float charged battery standby systems • GPS antenna for synchronisation of flashing lights

SL-LED Light Source

SL-LED Controller

How to Order SL-LED Light Source

Select from the products below:

SL-LED Light Source (12 sided):

SL-LED-324-W	High Powered LEDs - 36 x 5mm
SL-LED-324S-W	High Powered LEDs - 36 x 3.5mm

SL-LED Light Source Pedestal:

SL-LED- PEDESTAL-03	100mm vertical adjustment
SL-LED- PEDESTAL-04	50mm vertical adjustment
SL-LED- PEDESTAL-05	30mm vertical adjustment

SL-LED Controller Cable:

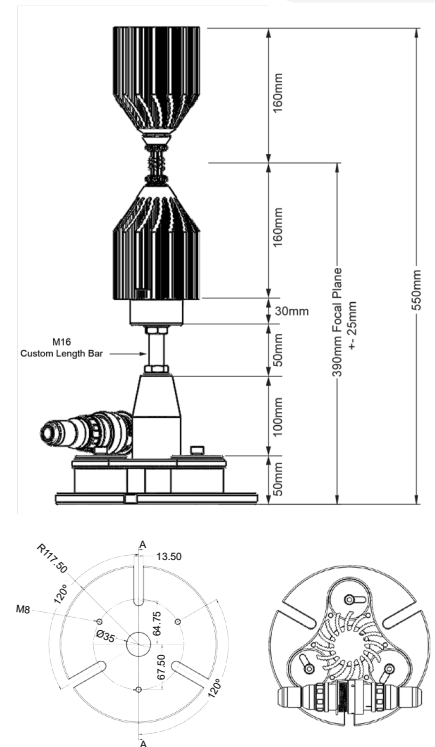|	
SL-LED-CTRL-CBL-XX	3m to 10m length options available Specify XX = 03 to 10m length

SL-LED Universal Controller:

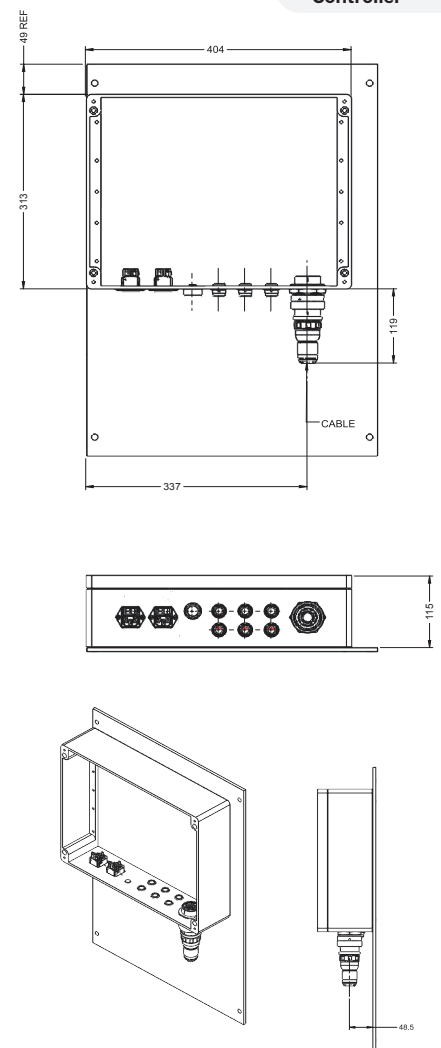|	
SL-LED-CTRL-2-24	Direct 24VDC supply
SL-LED-CTRL-2-24-GSM	Direct 24VDC supply and internal GSM
SL-LED-CTRL-2-UM	Direct universal mains supply
SL-LED-CTRL-2-UM-GSM	Direct universal mains supply and internal GSM

SL-LED Sensors:

SL-LED-CTRL-PE	Photo-electric cell for day/night control
SL-LED-CTRL-ROTATION	Inductive sensor for rotating optics
SL-LED-GPS-ANT-01	External GPS Antenna - 3 metres
SL-LED-GSM-ANT-01	External GSM Antenna - 3 metres

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Advanced Monitoring Using LED Controller

An alarm relay, RS232 and RS422/485 are utilised to monitor:

- LED status
- Power supply
- Temperature
- Light levels
- Internal fault conditions
- Turntable rotation speed

Advanced Programming Using PC Configuration Tool

The SL-LED light source can be configured to suit a range of requirements including partial, phased-in or complete lighthouse modernisation. The settings include:

- Multiple intensity settings
- 310 flash settings including custom character
- Adjustable on/off lux levels
- Low battery threshold
- Alarm conditions
- Speed tolerance variation

Redundant Failsafe

The LED controller includes a series of independent driver outputs, providing redundancy as each LED is controlled by a separate output driver.

Optional GSM Monitoring & Control

A built-in GSM module for monitoring and control is also available enabling users to access diagnostic data via cell-phone. The system can also be configured to send out alarm SMS text messages to designated cellular telephone numbers. Users can also have alarms and reports sent to designated email addresses via the Star2M asset management, remote monitoring and control platform.

Mounting Pedestal

The LED Light Source is easily mounted using Sealite's LED Pedestal. The inclusion of plug and play connectors make installation and servicing a simple task suitable for most mounting arrangements.

Optional GPS Antenna

For flashing fixed lens applications the station can now be flashed in synchronisation with a buoy channel or breakwater by fitting an antenna if these channels are already fitted with GPS.

Lifetime

The expected lifetime of the LEDs is approximately ten years, at which point their output is likely to be 70% of their original brightness. When compared with a lighthouse lamp with a life of 800 hours or a halogen lamp with a life of 2000 hours, these represent exceptional savings in maintenance and replacement costs
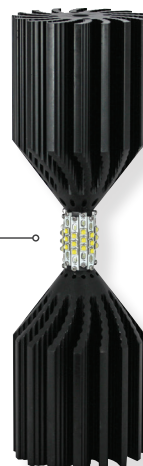
Shown with the Universal LED Controller, the light source is easily programmable using Sealite's PC Configuration Tool

SL-LED-324 Model

Anodised heat sinks to maintain temperature of LEDs on steady burning duties

Overall diameter of LED array ideally matches original light source and retains flash length

Shown with pedestal

IALA

Sealite

All Sealite products are manufactured to exacting standards under strict quality control procedures. Sealite's commitment to research and development, investing in modern equipment and advanced manufacturing procedures has made us an industry leader. By choosing Sealite you can rest assured you have chosen the very best.

- ✓ Experienced & Trained Personnel
- ✓ Worldwide Distribution Team
- ✓ Agile Manufacturing
- ✓ Product Innovation
- ✓ Precision Construction
- ✓ Total Quality Management
- ✓ ISO9001:2015
- ✓ Rapid Turnaround

We believe technology improves navigation™