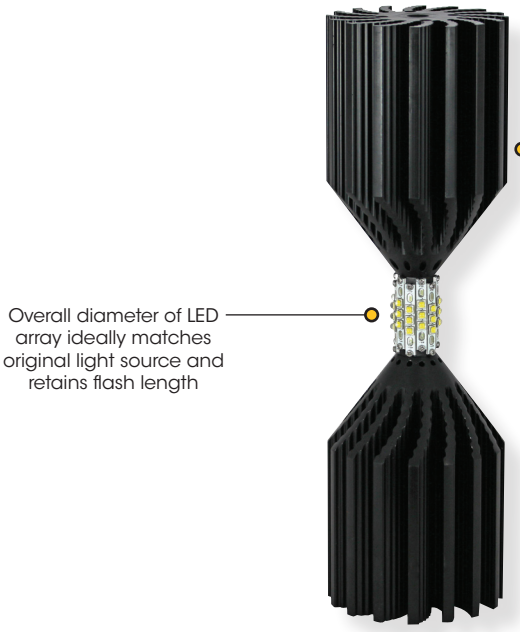
High Output LED Light Source

SL-LED Series for rotating or fixed lenses



Originally developed by the GLA R&RNAV Directorate and manufactured under license to Trinity House.

The Sealite Advantage

- **Retains the historical heritage of the lighthouse by utilising the optical efficiency of the lens**
- **Typically can reduce power consumption to approximately 15-20% of the original lamp**
- **Individual LEDs which shine over land may be turned OFF, resulting in additional power saving. This can be achieved in both flashing and rotating applications**
- **Can utilise customer's existing pedestal & controls**
- **LEDs can be powered from one or two synchronised controllers which drive alternate LEDs for added redundancy if required**
- **Creates the option to change the power source of the total lighthouse to solar**

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 makes huge savings in energy and maintenance possible whilst retaining the heritage value and optical efficiencies of the classical optical apparatus.

Capable of continuous or flashing operation, 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 instantly providing an 'eye-catching' sharp flash at full brilliance.

Low power and low voltage DC operation ensure that the SL-LED Series is well suited to battery and renewable energy power sources, such as solar photovoltaic. This further reduces running costs and the carbon footprint. The universal control provided can accommodate a wide range of power supply choices, operating modes and power levels.

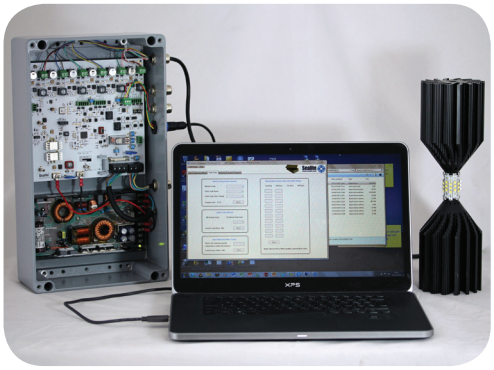
Classical Optics

There are two main types of classical optic, fixed and revolving. Fixed optics are usually beehive or drum shaped and emit a disc of light around the horizon, known as a 'fan' beam. Fan beams are often used to provide coloured sectors. Revolving optics consist of one or several lenses, which resemble 'bullseyes', rotating around a vertical axis. Each bullseye lens emits a directional shaft of light to the horizon, known as a 'pencil' beam.

Matching a light source to a classical lens can be a complex task. Knowledge of how complex lens systems operate is essential and if a light source is the wrong size or shape, or has the wrong emission pattern, the resultant beam intensity can be severely reduced.

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. This will depend on the power setting and whether or not the light is flashed or continuous. 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.



Easily programmable using Sealite's PC Configuration Tool

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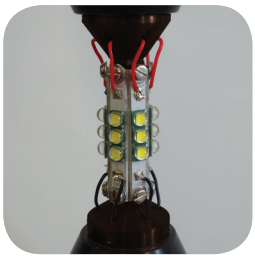
Consultancy Service

Sealite offers a consultative service to either survey the lighthouse on-site or prepare recommendations from customer supplied photographs and detailed lens drawing. This service enables customers to establish the range of a particular light source in the selected lens. Sealite can also provide a suitable check list form to help streamline this process.

SL-LED-40 Model

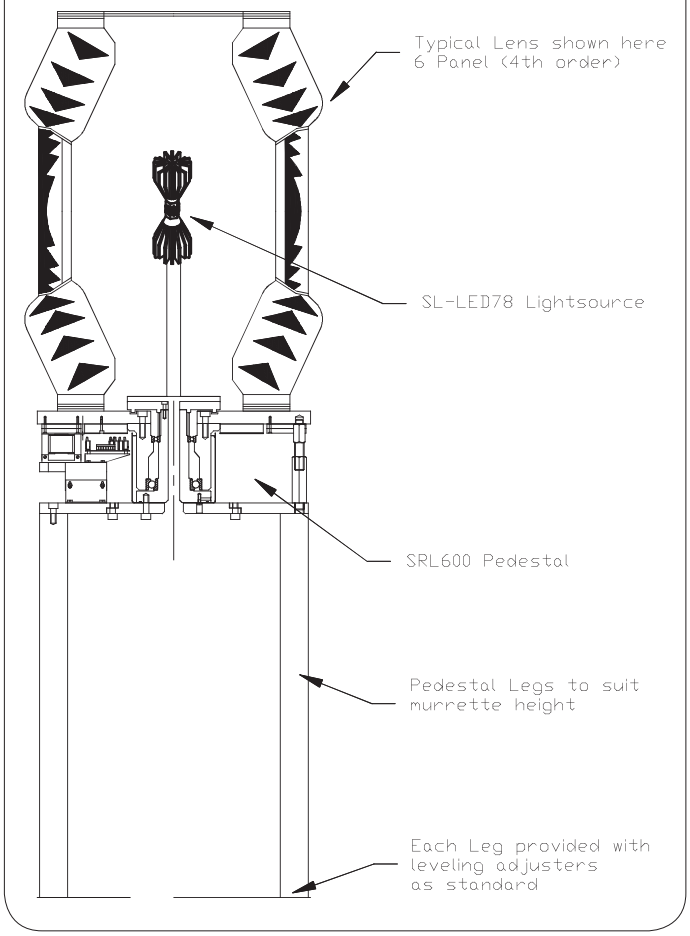
SL-LED-78 Model



SL-LED-162 Model

SL-LED-324 Model

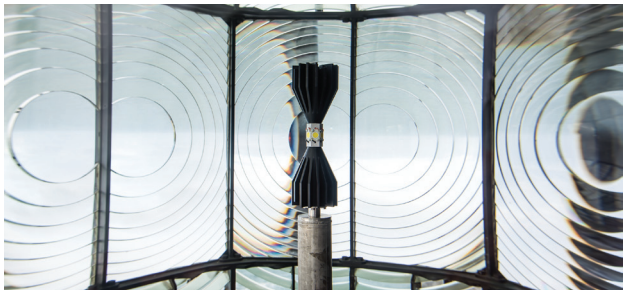
4th order rotating optic with SL-LED78 LED Light Source



Sealite LED Array Number	Maximum Power (Watts)	Total No of LEDs	Recommended Lens Order
SL-LED-40	40	6	6th, 5th, 4th, Small 3rd, 3rd
SL-LED-78	78	6	Small 4th, 3rd, 3rd, 2nd, 1st and above
SL-LED-80	80	12	Small 3rd, 3rd, 2nd, 1st and above
SL-LED-162	162	18	6th, 5th, 4th, Small 3rd, 3rd
SL-LED-324	324	36	Small 3rd, 3rd, 2nd, 1st and above

Please note:

1. The power to the array can be reduced to save power according to range requirements.
2. The maximum power for the SL LED 162 & 324 is only recommended for flash characters with a duty cycle of 33% or less. For continuous (non-flashing) operation, the SL LED 162 & 324 power should be limited to 54W and 108W respectively.
3. The number of LEDs can be reduced if a sector of less than 360 degrees is required.
4. Sealite can advise on the most suitable array, including its power consumption, for your requirements.



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