

# ELVO - Light v1.0

An extra low voltage LED light with dynamic power management



- Designed for simple and safe DIY installation
- Stylish metal construction with aesthetics for internal domestic situations
- Easy adjustment for versatile task or area lighting
- Warm white light is easy on your eyes
- Designed for ultralong lifespan with the LEDs cooled through substantial enclosure heat dissipation (all LED lifespan is directly related to heat rise)
- Light output will vary with available power, it will be considerably brighter when the sun is shining to better suit where your eyes have adjusted to. This is a great way to bring the outdoors inside
- At night when running off the battery, light will be consistent with night use, eventually dimming gradually when the battery capacity draws to a close, maintaining light output much longer
- Works in sympathy with 12 volt batteries, preventing battery damage by over discharging<sup>1</sup>
- Versatile functionality for many situations
  - Day / night solar and battery operation
  - Solar panel only (electronic skylight)
  - Solar power supplemented mains powered lights (full brightness or dynamic)
  - Lights available even during a power cut

## **Specifications:**

- |                       |  |
|-----------------------|--|
| • Input Voltage:      | 11.1 – 22 Volts DC                               |
| • Current             | 1.9 Amps max avg at full power                   |
| • Max Power:          | 35W @ 18V  |
| • Peak Inrush current | 2.85 Amps for 20 uS                              |
| • Light:              | 3500 lumens @ 18V TBC<br>1200 lumens @ 12.6V TBC |
| • Standby Current:    | 30uA (0.00003 amps)                              |
| • Protection:         | 1500W @ 10/1000uS transient dissipation          |
| • Weight:             | 1800 grams                                       |
| • Dimensions:         | L 1000mm, W 100mm, H 32mm                        |
| • Height adjustment:  | 30mm to 1000mm from ceiling                      |
| • Ambient temperature | 50°C max   |
| • Enclosure           | Aluminium  |

## Installation:

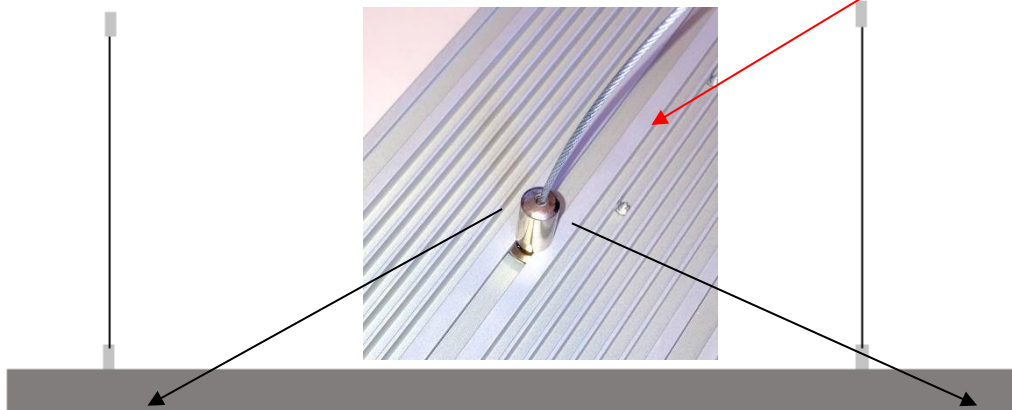
The light is **not waterproof** and must be installed indoors.

2 mounting wires are supplied for ceiling mounting

The light will be mounted by 2 wires screwed into a load bearing beam

Pull the cable through the side hole and screw the locking plug in place. Pull the wire until the correct height is attained. To release the wires, press the collet up into the locking plug, this will release the wire and it can be pulled back down.

There are 2 locking fittings on the light for the wires to support it. They can be moved along the channel by a ½ turn to loosen it, move to new location if need be, and retighten.

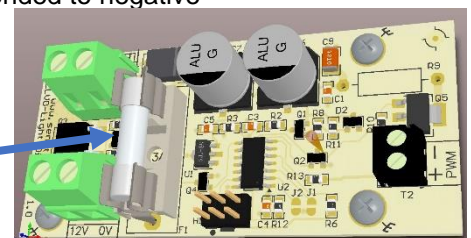


For focused illumination (task lighting), adjust lamp to around 1 metre above the workspace, for more general area lighting, adjust closer to the ceiling. Mount the switch close to the lamp and the battery as the supplied cable permits. Plug in the power cable



## Technical Notes:

- **Dynamic operation:** The light output will vary from dim (battery very low) to full brightness (full solar power) depending on the power available. This allows for the light to be used in many situations as illustrated in the final section of this manual "Installation Variations". If this functionality doesn't suit your application, contact ELVO and we can disable this feature.
- As part of the **dynamic operation**, if you turn the light off and immediately turn it back on again, there may be a 4 to 8 second delay while the light checks to see if there is enough power to restart without flashing on and off
- **The light starts** at a pre-set illumination level and then checks the power available, from there it will become brighter or dimmer over a matter of seconds (up to 30 seconds)
- **Power disconnect:** Below 11.1 volts the light will switch itself off (with extremely low standby current draw of 20uA). It will try to restart after 4 seconds if the voltage has risen to at least 11.6 volts and check if there is enough power available to prevent the light flashing on and off.
- **Common negative:** The lights metal enclosure is electrically bonded to negative
- **Fuse replacement:** Might happen if the wiring is customised
  1. Isolate the Power (at least turn off the switch)
  2. Unscrew the 2 screws at one end and remove the plate
  3. Carefully pull out the diffuser from its grooves
  4. Replace the 20mm 3.15A glass cartridge fuse
  5. Replace the diffuser, insert one side first into a groove and then snap the other side in place
  6. Replace the end plates and screws



## Installation variations

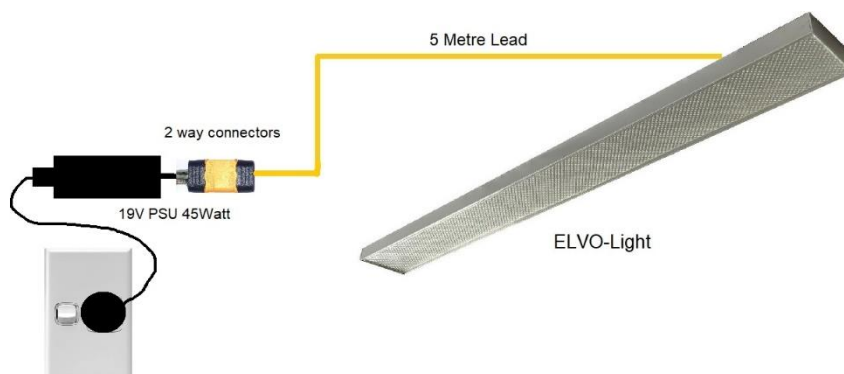
1. Standard solar with battery backing
  - a. Matching night and day light levels
  - b. Cost effective alternative to mains power for outbuilding lighting
  - c. DIY solar lighting
  - d. Easily expandable with other units like USB charging or more lights



2. Solar panel only
  - a. Skylight alternative
  - b. Bring daylight into places not otherwise possible



3. Mains powered
  - a. Great DIY lighting installation
  - b. Full brightness
  - c. Can be first stage building block into solar or similar



#### 4. Mains and solar power

- a. Full brightness lighting where solar power is supplemented by mains
- b. Good 'green' credentials

