



**WARNINGS**



**PLEASE READ THESE INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION / MAINTENANCE**

- If a fitting is found to be damaged, cease use immediately.
- Contains batteries – avoid extreme heat/ fire and recycle sensibly – check with your local authority or retailer for further advice.
- The unit may get warm whilst on for a period of time.
- Always take care when installing your solar lights, especially when mounting it in high places.
- Secure all cabling, leaving slightly slack.
- All connections should be made as watertight as possible to avoid electrical shortage.
- Do not modify this fitting or it may void any warranty and result in an unsafe product. Always consult the manufacturer.
- Do not connect alternative model luminaires to this solar panel.
- Ensure all mounting instructions are followed.
- Ensure the fitting is mounted out of range of head height to avoid injury.
- The unit will not charge correctly if the panel is behind glass or in artificial light.



**SPECIFICATIONS**

- Lamps:** F5 LEDs DC24V – shatterproof
- Colour Temperature:** Red, Yellow, Blue, Green.
- LED Life Expectancy:** 10,000 hours (approx.)
- Light Sensor LUX Level:** ON <30-70 Lux OFF >70-150 Lux (approx.)
- Function:** 19 Modes + Timers + Brightness (Variable – see remote control settings)
- IP Rating:** IP44
- Cable Length:** 50m +3m Input (approx.)
- Connector:** D-Connect Plug & Play
- Solar Panel:** Monocrystalline 3.8W 5V 900mA (5400mAh) – 5yr life
- Battery Type:** Li-Ion 18650 3.7V 1800mAh x3 (replaceable – life expectancy: 500 cycles / <4years)
- Battery Charge Time:** 8-9 hours (approx.)
- Max Illumination Time at Full Charge:** 40-80 hours (varies by function, location, weather & seasonal light conditions)
- Materials:** ABS, Polycarbonate, Tempered Glass, Epoxy Resin, Stainless Steel (screws)
- Working Temperature:** -10°C~45°C
- Mounting:** String Lights = Hanging / Wrapping // Solar Panel = Surface mount (adjustable bracket) + Ground Spike
- Maximum Cable Length:** 63m (maximum 5x 2m extension cables)
- Features:** USB-C Manual Charge Point / Remote Control / Multi-mode / Plug & Play
- Remote Control:** Infrared (solar panel receiver) – requires 1 x CR2025 battery (included)
- Dimensions:** Solar Panel: 230x130x35mm / String Lights: 53m Length, 3cm LED (approx.)
- Lamp Spacing:** 0.1m (approx.)
- Included:** 50m String Lights c/w 3m input, Solar Panel, Adjustable Panel Mount c/w 2x Screws/Plugs & Spike & Spike, Remote Control, 1m USB-USB-C Charger Cable, Instructions.



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**2 YEAR**  
**GUARANTEE**  
 see website for  
 more details

**CLEANING & MAINTENANCE:**

Occasional cleaning and care are recommended for this product. Wipe with a soft, slightly damp cloth to remove any surface dirt. To maintain efficiency, specifically clean the solar panel on a regular basis. Also, keep the solar panel free of debris and snow to prevent reduced battery life or malfunction. Do not use abrasive cleaners or a lot of water as this could damage the fitting. Please refer to our website for more information on the best way to clean different materials.

**RETURNS & RECYCLING:**

**If purchased from a 3<sup>rd</sup> party, please contact your supplier. If purchased direct, contact us by phone or email:**  
 Lumena Lights Ltd, Centre 33 Long March, Daventry, NN11 4NR Tel: +44 1327 871161 Email: [sales@lumenalights.com](mailto:sales@lumenalights.com)

**Our full returns policy is available on our website.**

Waste Electrical Products should not be disposed of with household waste. Please check with your local authority or contact us for more information. Please recycle packaging whenever possible. **Producer Registration Numbers: WEE/KC3440XY / BPRN0843**

Full product range & more information: [www.lumenalights.com](http://www.lumenalights.com)

## CHARGING:

**FIRST CHARGE:** Although the battery has been charged during manufacture, the battery level will have decreased during storage. The battery indicator identifies the current charge level (see Indicator Lights). Charge in full sunshine for approx. 12 hours prior to first use. Turn on the solar panel with the main power button on the back of the solar panel, and then turn off with the remote control. After 12 hours of charging turn on and select the desired setting. The lights will not remain illuminated during daylight. Batteries will continue to charge during daylight whilst the solar panel power button remains in the on position.

During poor weather conditions, it is recommended to use shorter Timer modes and dimming modes to retain battery charge for as long as possible. The solar panel can also be manually charged via the USB-C port on the back of the solar panel.

## INSTALLATION:

The Cosmic Range is designed to add decorative lighting to any outdoor space such as fences, pergolas, seating areas and eaves. A 3m input cable enables the solar panel to be mounted in prime position for optimum charging (south facing recommended), which can be surface mounted or spike mounted. Additional 2m extension cables available.

**Location** – It is important that the installation location is carefully considered, avoiding shady areas. The best position for the solar panel for optimum charging is south facing. Ensure there are no lights which could interfere with the panel, imitating daylight – mount panel above lights.

### SOLAR PANEL - SURFACE MOUNTING

1. Experiment with desired position of the solar panel, within 3m of the string lights, ensuring there is sufficient clearance for the full panel with no interference or obstructions.
2. Once happy with the positioning, mark the 3 mounting holes of each bracket in the desired location, using the brackets as a template. Ensure the bracket is the correct way up with the single screw facing the bottom of the solar panel and the adjusting wheel on the left hand side.
3. Drill out the 3x holes for bracket. For wall plugs supplied, drill with a 6mm drill bit at a depth of 30mm.
4. Insert the supplied plugs into the pre-drilled holes.
5. Secure the bracket in place with the supplied screws, using a manual screw driver – electric screw drivers not recommended in case of overtightening and damaging the mount.
6. Attach the solar panel to the bracket by sliding the panel over the top of the 3 section grip mount, until it sits flush with the edge of the mount. Take note of the downward install markings on the back of the solar panel (cable entry at base).
7. Adjust the solar panel to the desired position (45 degrees upwards – south facing recommended for maximum charge effectiveness) by loosening and tightening the adjustable serrated clamp wheel.



### SOLAR PANEL - SPIKE MOUNTING

1. Push the 4 fin ground spike into the hole of the adjustable surface mount base down to the stopper.
2. Dampen the ground where the solar panel is to be spiked into the ground.
3. Firmly push the spike into the ground being careful not to put pressure directly on the adjustable bracket.
4. Attach the solar panel to the bracket by sliding the panel over the top of the 3 section grip mount, until it sits flush with the edge of the mount. Take note of the downward install markings on the back of the solar panel (cable entry at base).
5. Adjust the solar panel to the desired position (45 degrees upwards – south facing recommended for maximum charge effectiveness) by loosening and tightening the adjustable serrated clamp wheel.



### STRING /FAIRY LIGHTS - SUGGESTIONS

1. Hang from above with small hooks or tacks with the cable between each LED.
2. Hang from the side e.g. fences with small hooks or tacks with the cable between each LED.
3. Drape in trees via branches. Handle with care. Cable ties recommended – do not overtighten to prevent damage.
4. For clearance from a fence or wall, use small hanging basket hooks.
5. Use a long pole with V-cut-out or similar to prop up in open areas.

### CABLE CONNECTIONS:

1. Connect the string lights to the solar panel via the D shaped plug & play connector. Push the male plug into the female socket of the solar panel and secure in place with the threaded cap (by hand). Festoon lights can be connected directly to the solar panel if preferred.

### **IMPORTANT:**

**Ensure any connectors not being used at the end of the cable is capped to protect the connection from water.**

If the solar panel is mounted at ground level, place the ground level cable inside conduit or piping to protect from water-logging, damage and chemicals found in soil. Cables can also be hooked up on fences safely.

## WORKING MODES:

Before use, remove the film from battery compartment. Remote control can command more than one fitting in range. Infra-red sensor is located on the back of the solar panel.

**Before using the remote control, turn on the power on the back of the solar panel to activate.**

**Default mode:** 19 Mode Cycle (Auto)

**MODE 1:** Red/Yellow to Blue/Green Wave

**MODE 2:** Red/Yellow to Blue/Green Racing Horse

**MODE 3:** Red/Yellow to Blue/Green Fade In/Out

**MODE 4:** Red/Yellow Fast Flash to Blue/Green Fast Flash, Alternating Running Horses

**MODE 5:** Red/Yellow to Blue/Green Star Flashes

**MODE 6:** Red/Yellow Fades into Blue/Green

**MODE 7:** Red/Yellow Fades into Blue/Green faster

**MODE 8:** Red/Yellow and Blue/Green Twinkle

**MODE 9:** Red/Yellow and Blue/Green Fade In/Out

**MODE 10:** Red/Yellow On and Blue/Green Flashes

**MODE 11:** Red/Yellow Flashes and Blue/Green On

**MODE 12:** Red/Yellow and Blue/Green Flash x3 then pause

**MODE 13:** Red/Yellow and Blue/Green On/Off

**MODE 14:** Red/Yellow and Blue/Green Flash x1 x2 x3 x4

**MODE 15:** Red/Yellow Flashing and Blue/Green Fade In/Out

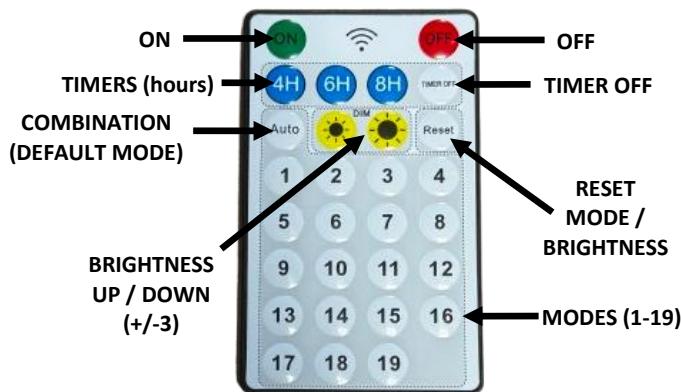
**MODE 16:** Red/Yellow and Blue/Green Constant Flashing

**MODE 17:** Red/Yellow Flash x3 and Blue/Green On to Red/Yellow On and Blue/Green Flash x3

**MODE 18:** Red/Yellow Fade In/Out and Blue/Green On to

Red/Yellow On and Blue/Green Fade In/Out

**MODE 19:** Red/Yellow and Blue/Green On at 50%



## INDICATOR LIGHTS / SOLAR PANEL:



### NUMBER:

Mode selected – change modes green MODE Button (displays only when the solar panel is turned on)

### BATTERY INDICATOR (Green):

Solid On – current charge in 25% segments (Lights On)

Flashing – Charging

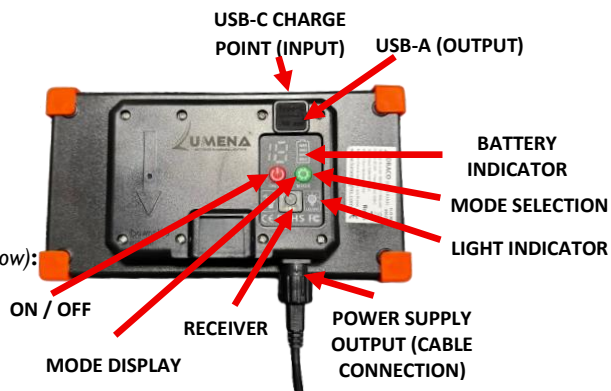
Off – No charge

### LIGHT INDICATOR (Green = Blue/Green / Red = Red/Yellow):

ON – Lights On (mimics mode selected)

OFF (with battery indicator light on) = Charging

OFF (with battery indicator light off) = Lights Off



## STORAGE:

Disconnect the string lights from the solar panel during storage, and remove the battery from the remote control. Turn off the panel with the main, integrated red power button. Maximum 6 months storage when charged. During storage period, recharge and full cycle will be required periodically to prevent damage to the battery.

## TROUBLESHOOTING:

### No power / Lamps are not illuminating

Please note that lights will only illuminate when the solar panel is in darkness and connected to the lights. During daylight, cover the panel to check if this triggers the lights illuminate. If the lights are not illuminating during hours of darkness, try the following:

- Check that the solar panel is positioned as per installation recommendations so that other lights are not interfering with the panel.
- Check that the plug & play connectors are fastened correctly and securely with rubber o-ring present.
- Check that the solar panel has been turned on by pressing the power button on the back of the panel (see indicator lights of battery). If there are no indicator lights, this suggests there is no power or the panel is completely out charge.
- Check for signs of damage or water ingress.
- Manually charge the panel with the USB-C cable to ensure batteries are charging correctly. If this charges the panel, it suggests that the panel is not located in full sunshine to charge sufficiently, it is not connected to the string lights or there is a solar panel fault.
- Check the total cable length does not exceed maximum run of 63m as this can result in voltage drop:

Cont..

### USB charging isn't working

- Check that you are charging via the USB-C port (input) – the USB port is an output only.
- Try an alternative USB socket.
- Try an alternative USB-C charge cable – if this charges the panel then the cable is faulty, If an alternative cable does not resolve the issue, it may be a faulty port.

### Remote Control not working

- Check that the battery tab has been removed and / or change the battery.
- Stand within 1m of the solar panel and direct at the receiver.

If any trouble shooting steps above have not resolved your issue, please contact your supplier / retailer, or contact the Lumena Lights Technical Team on 01327 871161 / sales@lumenalights.com

## FREQUENTLY ASKED QUESTIONS:

**Will they light up all night?** This will depend on the mode selected as there are timer options. If a dusk to dawn mode is selected, providing there is sufficient charge, they will illuminate all night. In winter months, or periods of particularly poor weather, batteries may not reach full capacity. Therefore, it is recommended to use a timer and / or dimming setting to prolong the battery charge.

**Will my selected mode be remembered every night?** Yes, the Cosmic Range benefit from memory function, so whichever mode is selected will be remembered night after night, until it is manually changed.

**What is the range on the remote control?** The remote can work up to 20m away in line of sight of the receiver. As this is on the back of the solar panel, the solar panel should be angled at 45 degrees upwards tilt and the remote should be directed straight at the underside of the solar panel, as close as possible – within 1-2m.

**Will the remote control work with multiple runs?** Yes, the remote control will work with as many sets of the same model within range.

**How can I manually recharge the batteries?** Uninstall the solar panel and use the USB-A to USB-C cable supplied with the kit to charge inside via a USB charger. You will find the USB-C input charging port on the back of the solar panel behind the rubber protector. If lights are left outside, replace the end cap on the disconnected male plug of the lights / extension cable to prevent water ingress whilst charging the batteries within the solar panel.

**Can I use additional 2m extension cables?** Cosmic string / fairy lights are supplied with a 3m input cable. Additional 2m extension cables can be used up to a maximum of 10m (5 extension cables).

**What is the guarantee?** Lumena offer a 2 year guarantee as standard with the Cosmic Range

**Can the batteries be replaced?** Batteries are accessible and replaceable; however, we recommend contacting your retailer so they can arrange for the battery to be tested and changed by our experts and returned to you.

<p><b>DRACO</b> WARM WHITE</p> <p>Create a cosy and welcoming atmosphere with the Draco Solar Festoon Lights. These warm white solar festoon lights are supplied as a 5m length.</p> <p><a href="#">VIEW ONLINE</a></p>		<p><b>PHOENIX</b> FLAME EFFECT</p> <p>The Phoenix Solar Flame Festoon Lights are a real eye catcher with realistic flame flicker effect. These amber solar festoon lights are supplied as a 5m length with 10 traditional style lamps.</p> <p><a href="#">VIEW ONLINE</a></p>	
<p><b>HYDRA</b> RGBY-DW</p> <p>Create eye-catching effects with the Hydra Solar Meteor Festoon Lights. These festoon lights are multi-coloured with an array of fixed red, green, blue, daylight white and warm white ES / E27 bulbs.</p> <p><a href="#">VIEW ONLINE</a></p>		<p><b>VELA</b> RGBY BULBS</p> <p>The Vela Solar Coloured Festoon Lights are a charming addition to outdoor spaces. These festoon lights feature a vibrant array of fixed red, green, blue and yellow ES / E27 bulbs.</p> <p><a href="#">VIEW ONLINE</a></p>	
<p><b>ARA</b> DUAL LEDS (W/D)</p> <p>The Ara dual white solar string lights are beautiful addition to outdoor spaces. The string lights are a combination of warm white and daylight white LEDs.</p> <p><a href="#">VIEW ONLINE</a></p>		<p><b>PAVO</b> RGBY LEDS</p> <p>The Pavo coloured solar string lights are a vibrant addition to outdoor areas. The multi-coloured LED array includes red, yellow, blue and green lamps.</p> <p><a href="#">VIEW ONLINE</a></p>	
<p><b>COSMIC</b> COMMERCIAL GRADE FESTOON &amp; STRING LIGHTS</p>	<p><b>ORION</b> WARM WHITE</p> <p>Elevate your outdoor setting with these warm white LED lights. The Orion 12V festoon lights deliver a comforting and welcoming gentle glow, which is ideal for pathways, gardens, seating areas and more.</p> <p><a href="#">VIEW ONLINE</a></p>		

Full product range & more information: [www.lumenalights.com](http://www.lumenalights.com)