Freelite™

Model: **PVF127-BL**

Nox LED Solar Floodlight with PIR Sensor

Installation Instructions

Ensure you read the instructions fully before commencing installation.

This solar floodlight comes in two parts; the flood light head and the photovoltaic panel connected by a power cable. The flood light head houses the lithium iron phosphate battery (LiFe P0$_4$) along with the integral LED light source and an energy management system (EMS). The separate photovoltaic panel (PVP) can be mounted away from the floodlight. This allows the PVP to be directly aimed to the north at the optimum angle for sun exposure for battery charging. It also allows the floodlight to operate inside a building, a shed, a garage during the day while charging continues.

POSITIONING YOUR SOLAR FLOOD LIGHT

FLOOD LIGHT HEAD:

The floodlight needs positioning to serve its purpose and is usually mounted well out of reach. Recommended height is 3 metres to 6 metres. It is a compromise of lighting the area required and having the Passive Infrared Sensor (PIR) facing in the appropriate direction.

Ideally the PIR on front of the floodlight is pointing across the path of movement. It can detect front-on movement but will not be so sensitive. Avoid facing the flood light in the direction of air-conditioning, heating units etc as this may cause nuisance tripping of the PIR sensor.

PVP PANEL:

For best results your PVP panel should be set up to be exposed to as much direct sunlight as possible. It is most important to capture the sun efficiently during short winter days. The best possible installation scenario is with the PVP set at a 40 degree angle from horizontal and facing North (see chart below). All day sun is best for battery life, but some locations only offer direct sun for part of the day. The sun tracks east to west and is strongest to the north at noon. Try and avoid shading of the PV panel from trees, buildings and fences etc when choosing the exact position. The less shading the better. When considering an object that may shade. remember that the sun tracks lower in the wintertime and that is when the PV panel needs good exposure as the days are shorter. Do not place the PV Panel where artificial light from the flood light itself or other artificial lights on the property or adjoining properties will shine on to it as this may stop the automated sensor modes from working.

Ideal angles for solar collectors in New Zealand (from horizontal)

Location	Latitude	Summer Angle	Winter Angle
Whangerei	35° 45’	26°	51°
Auckland	36° 50’	27°	52°
Wellington	41° 15’	31°	56°
Christchurch	42° 30’	32°	57°
Invercargill	46° 30’	36°	61°

POWER CONNECTION CABLE:
The PVP position is limited by the cable length. The cable supplied is 2.2 metres long. A 2-metre extension cable **PV100-EX2** is available to purchase separately if required.

PRE-ASSEMBLE YOUR FLOOD LIGHT

Assemble the mounting bracket to the floodlight using the fasteners supplied in bag 1.
Assemble the mounting bracket to the PVP panel using the fasteners supplied in bag 2.

FIXING THE FLOOD LIGHT IN POSTION

Ensure you protect the flood light head and PVP panels while you are installing them to prevent any damage such as scratches. Place on a clean sheet of cardboard or similar whilst working on the installation.

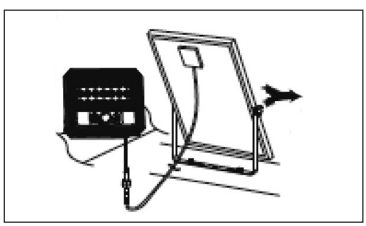
The flood light head can be wall or eave mounted. Ensure it is fixed to a strong and stable structure.

Ensure you fix the bracket using at least 2 fixings. Use fixings suitable for the substrate the floodlight is being fixed to.

Ensure the PVP is fixed to a strong and stable structure.

Ensure you fix the bracket using at least 2 fixings. Use fixings suitable for the substrate the PVP is being fixed to.

Plug together the cables between the PVP and the flood light head and tighten the screw cap to keep plug connection protected.



OPERATING YOUR FLOOD LIGHT

Once all mounted push the ON button on the front of the floodlight. Some green lights will flash. From now on the floodlight functionality can be adjusted by the remote control from ground level.

The more blinking green lights showing, the more the battery is charged and when fully charged the green lights will be still and a red light will appear. The light will not function if the battery is at 5% or less.

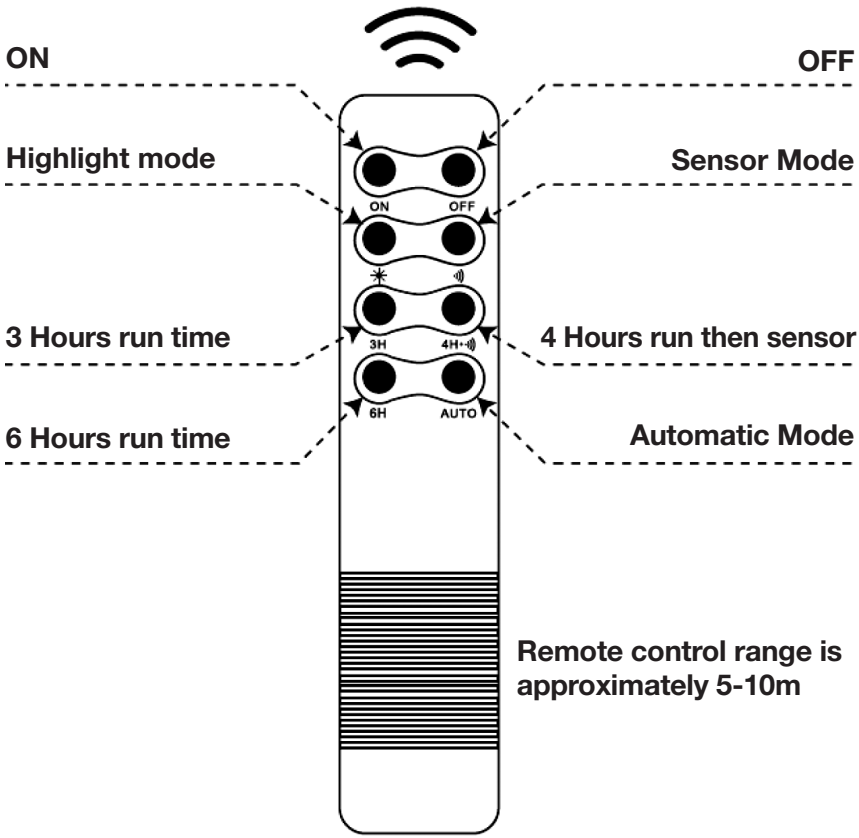
REMOTE CONTROL:

The EMS energy management system gradually steps down the light level during the night to ensure a battery level is retained for subsequent nights with a similar lighting cycle. The EMS ensures the light is running throughout the whole night, it automatically turns the light on at dusk and turns it off at dawn. If the light is not ON at night, press the remotes ON button.

The remote control can switch to various functions, the most popular being the PIR sensor Night-only function. When the PIR button is pressed the light output drops to a low level until warm movement is detected by the PIR sensor. When warm movement is detected the light will then step-up to full power and stay there until there has been no movement for a period of 30 seconds.

REMOTE CONTROL MODES:

- The **ON** and **OFF** buttons are to force the Light ON or OFF / **day or night**
- **Highlight** mode. The light runs at full brightness for 3 hours / **day or night**
- **Sensor** mode light on at 5% brightness, full brightness when PIR sensor detects movement/ **night only**
- **3 hours** on, then off / **night only**
- **6 hours** on, then off / **night only**
- **4 hours** on, then sensor mode / **night only**
- The **AUTO** button returns the floodlight to the default on all night mode with gradual step-down program.



PRODUCT SPECIFICATIONS:

PVP Voltage	5V Monocrystalline
PV peak wattage	10 Watt
Battery Voltage	3.2V lithium Iron Phosphate $LiFePO_4$
Battery Watt-Hours	40 Wh
LED wattage	13.5 W
Light beam	90 degrees
Colour Temperature	6,500K
Measured Lumens	1,700 lm
Battery autonomy	1-2 days of cloud
Floodlight size	210mm height x 255mm wide
PVP size	300mm height x 205mm wide
connection cord/cable	2.2metres long
Water Ingress Protection	IP65
PIR sensor	10M range, 120 degrees
Materials	UV stabilised ABS and Polycarbonate

MAINTENANCE.

Important:
While rain will wash dust off from the PVP other debris will need cleaning off from time to time with soapy water and a soft cloth to maintain battery condition.

If this product is not working and is still not working after referring to the info centre on **www.alphalighting.co.nz** do not attempt to repair the fitting yourself –
please contact Gartner Superlux Ltd for advice. There are no user serviceable parts on this product.

Warnings and notes:

The battery is a recyclable item, at the end of life ensure you dispose of the product responsibly.

The LED Flood Light is made to be connected to the PVP panel it is supplied with.
DO NOT wire to any other power source.

Due to continuous design improvement, specifications are subject to change without notice.

IMPORTANT KEEP INSTRUCTION SHEET
IN A SAFE PLACE FOR FUTURE REFERENCE