

Model EE818plus User Manual

SMART Solar Light ... Built with CREE Ultra-Bright LED



IMPORTANT Read this User Manual Before Installing...!!!

Included in this package:

- | | | | | |
|----------------------|----------------------------------|--------------------------------|------------------------------------|--|
| 1 – Solar Light Body | 1 – Rechargeable Li-Poly Battery | 1 – Tempered Glass Solar Panel | 1 – Wall Mounting Plate w/hardware | 2 – Hardware Package with Screws and Anchors |
|----------------------|----------------------------------|--------------------------------|------------------------------------|--|

Initial Installation Set-up (Refer to Fig. 1)

Connecting the Battery before setting up

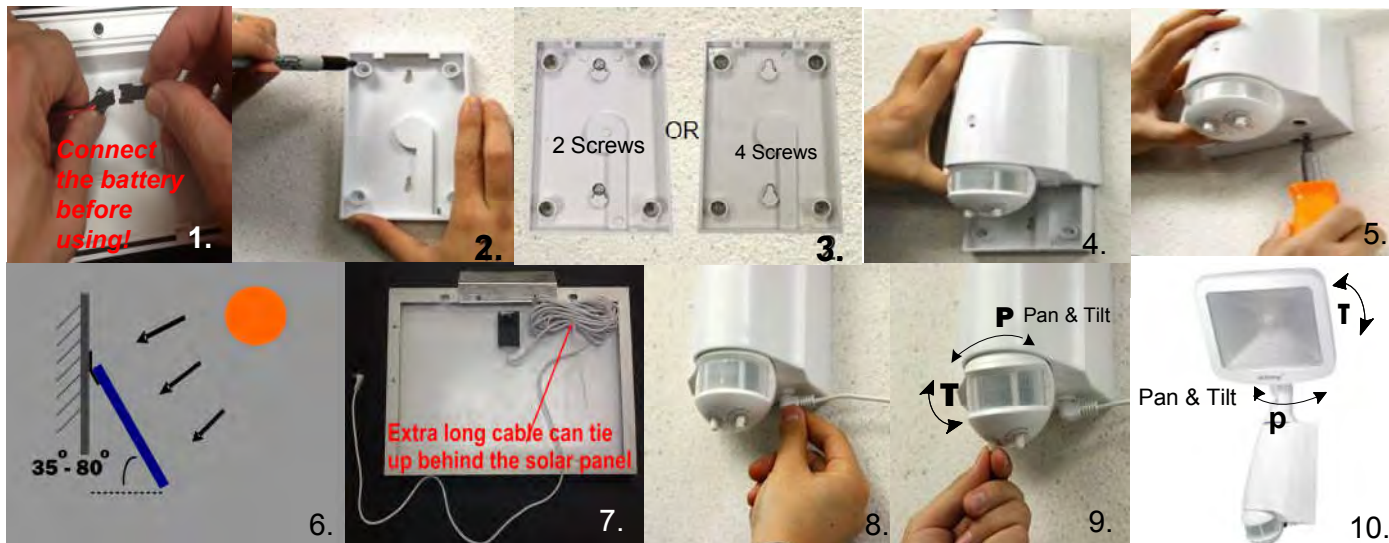
1. The battery has been pre-charged before shipping and the light is ready for use
2. Make sure the main switch is in the **OFF** position
3. Open the battery cover on the back of the light and plug the battery into the connector and carefully make sure the plug position is correct then replace the cover (Fig. 1-1)
4. Initially check the light and battery by moving the switch to **SMART (ON)**, it should light up, then turn the switch back to **OFF** for installation

Mounting the Light Body

1. The light body **must only be mounted in a vertical position** and it should be mounted at least 6 to 10 feet above the ground
2. Choose a flat and safe mounting surface. Mark the screw positions through the mounting plate screw holes onto the mounting surface. Use 2 or 4 hole mount, (Fig. 1-2 & 1-3)
3. For wood, vinyl and metal surfaces mount the back plate directly with provided screws. Drill clearance holes using a 3/16" masonry bit for surface of concrete, brick or stucco. Insert the anchors provided with screws then position the mounting plate and screw the fasteners in securely
4. **Attach the light body unit** to the wall mounting plate:
Slide the whole light body onto the wall mount plate from top going down with the light body "hinged" to the mounting plate (Fig. 1-4) Then secure the mounting with the small securing screw on bottom of the light body (Fig. 1-5)
5. With the light body firmly secured in it's mounting position, the **Pan & Tilt** adjustment features can be used to adjust the direction of the motion detector and the light head directions for optimal performance and coverage. The direction and angle of the motion detector can be adjusted (Fig. 1-9). The LED light head can also be adjusted horizontally 180°, forward and backward 120° (Fig. 1-10)

Mounting and Connecting the Solar Panel

1. The solar panel must be mounted in a non-obstructed position where it will receive an average of at least 4 hours daily of direct sunlight all year round. It should be mounted with a tilt of 35° - 80° degrees (Fig 1-6). A sturdy mounting location such as a wall, roof, on top of patio, under the eaves, secure pole, or floor/ground base. This is required to make sure the solar panel is fastened down properly for all weather conditions.
2. For Northern hemisphere installations the solar panel should be mounted with a Southerly facing position and visa-versa for Southern hemisphere installation should face to the North (Australia, South Africa, South America e. g.)
3. Attach the hardware mounting bracket to the solar panel. Determine what length of the 10' connecting wire cord is needed to reach the position of the light body and then tie the unused cord behind the solar panel with the plastic zip-tie that is provided (Fig. 1-7)
4. Then mark the screw holes through the mounting bracket and secure the solar panel in position with the provided hardware
5. Firmly plug the solar panel plug into the bottom of the light body (Fig. 1-8). **The RED-LED indicator (inside the motion ball) will begin to double flash** (Fig. 1-8) indicating that charging status is active during a normal daytime sunny, partially sunny or cloudy day. If this does not happen please check that the plug is fully plugged into the light body or if there is a problem with the wire.



Just "One Easy Step" to Begin Using the Light

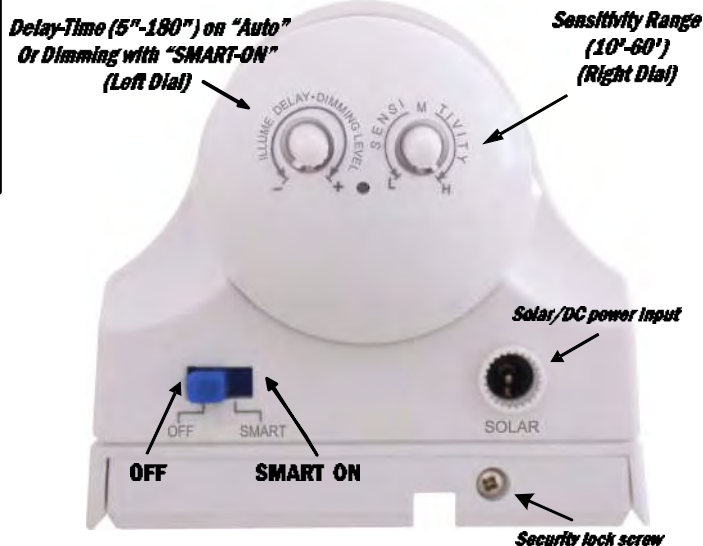
After the battery is connected and the light fixture and solar panel are mounted you may immediately begin using the light by just moving the main switch to the **SMART (ON)** position. Using the factory pre-set profile is recommended (Fig.2).

Note: NO FURTHER ADJUSTMENTS ARE NECESSARY

"eLEDing" Solar Lights are SMART lights and they have an embedded intelligent microprocessor control chip. The light has two operating modes, '**SMART-ON MODE**' and '**AUTO MODE**'. Both are SMART modes of operation and utilize stored energy capacity for the most optimum lighting efficiency.

The "settings" for Sensitivity/Range of motion, length of illuminating time, levels of brightness and dimming are set and controlled with adjustable dials (Fig. 2)

The family of SMART solar lights use an exclusive **Intelligent Power Management (IPM)** embedded feature for managing and optimizing the Lithium based battery for a full range of operation. This optimizes the battery's life cycle to adapt to most environmental conditions allowing both the battery and light to perform for many years.



Battery will charge with the switch in either OFF or SMART ON position

Fig. 2 – Main Switch & Control Settings

SMART Light MODES (remove battery cover to access switch)

“SMART-ON” MODE of Operation

In **SMART-ON MODE** with the switch position set to **SMART** the solar light operates as a true **Dusk to Dawn** light. The unit senses its surrounding ambient light level and will turn ON in darkness providing adjustable moonlight soft glow lighting all night long. An innovative dimming adjustment feature allows the user to adjust the soft glow lighting so that it can be dimmed to a level of 10% to 50% of max brightness. When motion is detected it lights up to its maximum brightness within the set sensitivity range. For new installations or if replacing existing AC light applications **SMART-ON** is the recommended mode when used as an outdoor or indoor light for **Security and Safety lighting**. **It can also be used to enhance CCTV applications to illuminate coverage area of the camera.** The **SMART-ON** MODE enables the light to be optimized by using the **Left Dial** (Ref. Fig. 2, page 1) to adjust the way the light brightens up or dims down after motion has been detected.



Fig. 3 SMART & AUTO Mode
Factory default is SMART Mode



Fig. 4 Unusual Positions
Light Head must only be mounted **VERTICALLY** only.
Do not mount in any unusual positions as shown in Fig.4

“AUTO” MODE of Operation

In **AUTO MODE** the solar light operates as a motion sensing light and it lights up to full brightness when motion is detected. The motion Sensitivity/Range can be adjusted by turning the **Right Dial**. The Delay Illuminating time, which is the length of time that the light stays on after activation, can be adjusted by turning the **Left Dial** (Ref. Fig. 2, page 1).

The illuminating **Delay Time** can be set using the **Left Dial** to set the desired length of time for the light to be on after motion is detected. It is adjustable from 5 to 180 seconds. The length of time the light will stay ON is automatically extended as long as motion is continually detected and it will not turn off until the motion has stopped and after the illuminating **Delay Time** has expired. **(When set to AUTO MODE the max illumination time of 180 seconds is recommended.)**

The motion **Sensitivity/Range** can be set using the **Right Dial** to set the desired sensitivity/Range for the application. This adjustment has a motion sensing range from Low 10', Med. 35', High 60'+ **(For most applications set the dial to between M-H, and for warmer temperature geographical environments set this slightly higher.)**

Cautions: 1) Adjust the **Sensitivity/Range** so that it is not set too sensitive, this will increase false activations and reduce stored battery energy. 2) If the **IPM** feature detects that the battery does not have enough stored energy to operate at full brightness when **AUTO MODE** is set then it will automatically reduce the light level to half brightness in order to maintain a level of safe lighting until it again receives enough sunlight in good weather condition to restore it back to normal status.

Set Up-Walk Test Procedure and Adjustments

1. To set up **eLEDing** for your applications the unit comes with a **Set-up/Walk** Test mode to ensure proper installation and performance is optimized. To activate this mode move the main switch from **OFF** to **SMART** position and the inside mode set to **AUTO** (Fig. 3). **This Set-up/Walk Test mode can be reactivated at anytime to adjust your settings for your application by sliding the switch to OFF then SMART in any condition day or night.**
2. When the main switch is set initially to **SMART from the OFF** position for a period of 10 minutes the Set-up/Test mode will be active allowing the user to adjust the light settings. This mode will work in day or night time conditions. The length of Delay Time for light illumination can be adjusted at this time for your application from 5 seconds minimum to 180 seconds maximum. During this Set-up/Test mode **set this time to 5 seconds for testing purposes and when you are satisfied with your set up then set it to your application (180 seconds is recommended)**. The Motion Sensitivity/Range can be adjusted at this time for your application from 10' minimum to 60'+ maximum, also in conjunction adjust the motion detector head using the **Pan** and **Tilt** feature for your application during this time.
3. The **Set-up/Walk** Test mode is active as long as motion is seen or will automatically disable if 10 minutes has passed without motion being detected. During this mode, the indicating Red LED light will flash through the motion detection lens providing visual confirmation of motion detection adjustments. When a period of 10 minutes passes without motion detection the unit will automatically switch to normal operation mode and will start illuminating once it senses a change to darkness from daylight ambient light conditions.
4. After the initial **Set-up/Walk** Test is complete the MODE switch may either be kept in the **AUTO** mode for Security sensing flood lighting or moved to the **SMART-ON** mode for Dusk-to-Dawn security and safety lighting. **SMART-ON is the recommended mode providing both Security and Safety lighting.**

Note: The Red LED indicator light inside the ball head flashes for the following reasons: 1) To indicate motion activity during the 10 minutes initial Set up/Walk Test. 2) To indicate the battery is low when the sensor detects motion during darkness. 3) To indicate charging status during normal charging either in sunny, partly cloudy and cloudy daytime periods, or when the AC/DC-digital charger (option) is being used for charging in any conditions.

Storage: If this unit has been stored over six months before initial operation then the battery may need to be re-charged. To re-charge the battery after storage turn the main switch to OFF, connect the battery, plug the wire cord from the solar panel to the light and place it in direct sunlight for 1-2 days. Or charge for 2-3 hours using only our **optional accessory AC-DC Digital/Switched Power Adapter (EE-DPS-0.8A)**.

User tips

SMART Mode soft glow lighting can be adjusted by using the dual function **Delay-Time/Dimming dial, (Left Dial)**. This allows the user to select a dimming level range from low to high **When motion is detected the light will brighten up to the factory fixed max level and then gradually dim back down to the soft glow lighting level set by the user.**

Caution - The higher the minimum soft glow level is set then the more stored battery energy is used to provide soft glow lighting. If the **IPM** detects that the battery does not have enough capacity to run this mode with a high setting then it will automatically go into **AUTO** profile to provide safety lighting until it receives enough sunlight to operate the feature correctly.

In **SMART Mode** If your geographic location has outstanding daytime sunlight conditions all year (California, Nevada, Arizona, New Mexico, Florida of USA e.g.) then you can increase the dimming level to take advantage of a brighter projection of **Moonlight soft glow Dusk-to-Dawn lighting. The Sensitivity/Range adjustment** functions and setting are identically as described for the **AUTO** profile. For most applications the recommending factory preset is **SMART Mode (default, Fig. 3).**

In both AUTO and SMART-ON profiles if the **IPM** detects that the battery does not have enough capacity to run either profile in critical weather conditions, it will automatically disable illuminating function leaving only the charger active to protect the battery from over discharge causing damage. Once enough sunlight is received to charge the battery, the unit will go back to **AUTO** profile if set in **AUTO**. if set to **SMART-ON** profile then it will first go into **AUTO** profile until it receives enough sunlight energy to operate **SMART-ON** profile properly.

Table Light Conversion using optional Table Stand accessory (EE45/80/18-PBS), Fig. 5). This option converts the light to a portable table light for camping, picnics, reading/studying and other indoor or outdoor activities. Use as a Table Light during low light level conditions. Move switch to **SMART-ON** then make sure to select **SMART Mode** (Fig. 3), then adjust Left Dial (Dimming) for desired reading light level.

An optional AC-DC digital power adapter (EE-DPS-0.8A,) can be used as a quick charger. Also with this adapter it can be used in either **AUTO** or **SMART-ON** as a standard AC/DC powered motion sensing flood light with battery back-up capability for indoor/outdoor security/safety lighting applications. It can be wall or table mounted, or used as a standard portable/table light (Fig. 5).



Fig.5 Table Stand & DC Power (option)

Avoid placing objects in front of the motion detector that may affect detecting performance. Avoid installing the unit near air conditioners, central heaters, or high voltage systems. Avoid placing the motion detector head towards street traffic or other high movement areas which cause excessive triggers, resulting in shorter battery reserve capacity. If this situation is unavoidable, decrease the sensitivity and delay time to achieve optimal balance. Motion detector is more sensitive to motions across the device and less sensitive to motion moving towards or away from it. The solar panel should be mounted where maximum sunlight can be collected. Typically, the solar panel should face south and avoid facing north (for Northern Hemisphere only, opposite way for Southern Hemisphere) with 35°- 80° tilt up direction (Refer to Fig. 1-8) It's fine facing to West or East where sunlight can directly charge the panel for at least 4 hours per day on average. Use a soft wet cloth to periodically (at least once a one year) clean the solar panel to avoid the reduction of energy output due to accumulated dust. Clean accumulated snow as soon as possible during the snowing season.

Product Specifications

Coverage: Up to 180° sensing angle	Detecting Range: 180°, up to 60'x 60' (L-10', M-35', H-60+')
Light Head: 8W Single super bright -LED (CREE -USA)	Energy Storage: 24WH Li-poly battery
Solar Panel: 13VDC/8W Tempered Glass (with 10' cable)	SMART Mode: 8hrs max bright set to 80+hrs min bright set
Weight: 1.7 LBs (Light Body)	Operation Temp.: -4°F to 125°F, Weatherproof IP54
Brightness: 100W Halogen Lamp (On Peak), 5/7M color	Complies with: FCC Part 15 Class B and ICES-003:2004

Note: Installation with factory default settings is recommended for most applications

Optional Accessories:

AC-DC Power Adapter (EE-DPS-0.8A) : Must be switch type (digital) 12VDC/0.5-1.5A with current limited power supply (Fig. 5)
Table Stand (EE800PTS) : For use as a table light (Fig. 5). Solar panel 15' extension cable (EE-SPEC-15F).

Important Safety Information

Please unplug the battery when shipping the light or packing for flight traveling. Do not dispose of battery in fire as this may result in an explosion. Do not expose the light to fire or intense heat as the battery may explode. Do not immerse in water. Never look directly into the light or shine it into another person's eyes. Follow proper safety tips to prevent injury such as falling from a ladder during installation. Consult your local Bi-Laws or local safety guide lines for installing the light fixture on a building.

One Year Limited Warranty

PLT guarantees this product to be free from defects in material & workmanship for (1) year.

This warranty does not apply to damage from misuse or incorrect installation/ connection. This warranty does not cover accessories, bulbs, batteries, accidents, alterations, unauthorized use or repair, neglect, misuse, abuse, damages or defects resulting from normal wear and tear (including chips, fading scratches, abrasions or discoloration due to usage or sun exposure), or failure to follow instructions for care and maintenance, fire, flood, and Acts of God. This warranty does not include liability for incidental or consequential damages. **PLT** is not responsible for any damages in excess of the retail purchase price of the product under any circumstances. The consumer is responsible for the installation of, removal of, and reinstallation of the product.

Introduction and Intellectual Property Rights Statement

Thank you for purchasing the LED Smart Solar Lights. With its effortless setup and lightweight design the LED Smart Light conforms to all your lighting needs. It was designed and made to provide many years of trouble free service using environmentally friendly Solar-Hybrid-Lithium based energy technologies. Covered under multiple US, European, China and other international patents granted and pending worldwide. All rights reserved.

Introduction eLEDing Technology Related Green Systems

Solar Powered Ultra-Bright 4W CREE LED eMitter Flood, Spot, Building and Parking Lot, Security & Safety Lights, white CCTV illuminator



Specifications

Coverage: Up to 180° sensing angle	Detecting Range: 180°, up to 60'x 60' (L-10', M-35', H-60+')
Light Head: 4W Single super bright -LED (Cree-USA)	Energy Storage: 11WH Li-poly battery
Solar Panel: 12VDC/4W Tempered Glass (with 10' cable)	Mode: A for 80+hrs continuous; B for 9-80+hrs
Weight: 1.0 LBs (Light Body)	Operation Temp.: -4°F to 125°F, Weatherproof IP54
Brightness: 60W Halogen Lamp (On Peak), 5/7M color	Complies with: FCC Part 15 Class B and ICES-003:2004

Solar Powered Ultra-Bright 5W CREE LED eMitter Self-Contained Flood, Spot, Building Security & Safety Lights, white CCTV illuminator



Specifications

Coverage: Up to 160° x 120° angle	Detecting Range: 160°, up to 45'x45' (L-10', M-25', H-45+')
Light Head: 4W Single super bright -LED (CREE-USA)	Energy Storage: 13WH LiFePO4 battery
Solar Panel: 13VDC/4W Mono-crystalline self-contained	Smart Mode: A for 40+hrs continuous; B for 9-40+hrs
Weight: 2.2 LBs (Light Body), Black/White light fixture	Operation Temp.: -4°F to 125°F, Weatherproof IP54
Brightness: 60W Halogen Lamp (On Peak), 4M/7M color	Complies with: FCC Part 15 Class B and ICES-003:2004

eStreet & ePower

