

SolaPalm Lighting Unit Quick Guide

Version. 1.0

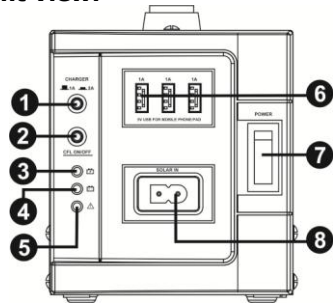
1. Package Contents

You should have received the following items inside of package:

- Lighting Unit
- External battery connector x 1 pc
- Quick Guide
- E27 lamp holder with 2-m cable x 1 pc

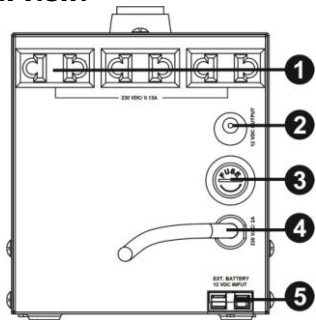
2. Product Overview

Front View:



1. 1A/2A charger select
2. CFL on/off switch
3. Charging status indicator
4. Battery status indicator
5. Fault indicator
6. USB charger ports
7. Main power switch
8. PV input

Back View:



1. CFL output receptacles
2. 12VDC output connector
3. 2A AC fuse
4. AC input
5. External battery connector

3. Installation and Initial Startup

NOTE: Before installation, please inspect the unit. Be sure that nothing inside the package is damaged.

Placement & Storage Conditions

Install the unit in a protected area that is free of excessive dust and has adequate air flow. Please place the unit away from other units at least 20 cm to avoid interference. Do NOT operate it where the temperature and humidity is outside the specific limits. (Please check the specs for the limitations.)

Connect to Utility and Solar Panel

Before initial use, please plug in the AC input cord. If using solar power to charge, please select suitable 24W solar modules and connect to PV input connector. The spec for solar modules is listed below:

Recommended Power rating	Max. Open Circuit Voltage	Max. Input Current
24W	30 VDC	1.6 A

When solar power is efficient, it will use solar power to charge battery first. Please refer to below table to select charging current:

Charger source	Using built-in battery	Using external battery	Charging current
Utility only	Yes	No	1 A
Utility only	Yes	Yes	2 A
Solar power (24W)	Yes	No	2 A*
Solar power (24W)	Yes	Yes	2 A*

*Real charging current may be changed according to spec of solar panel.

Connect to External Battery Bank and Charging

If the model is already built in battery and applying external battery at the same time, please use same brand and same spec of inside battery. Assemble external battery connector with battery cable. Then, simply plug external battery bank to the unit. For the best results, suggest to charge battery at least 8 hours before initial use.

Connect the Load

There are three kinds of output connectors for different devices. Please follow below instructions to connect suitable loads to the unit.

CFL Output Receptacles

Plug in the bundled lamp cable to output receptacle on the rear panel of the unit. Built-in power switch in cable is to control power for lamp holder with utility connection. There are three output receptacles on the rear panel of this unit to support up to 3 CFL lamps at the same time.

USB Charger Ports

Plug your mobile phones/devices into USB charger ports. Then, your devices will start to be charged when this unit is powered on. You also can connect two USB charger ports into one 2Amp charger port.

12VDC Output Connector

This output connector is for LED bulb lighting or DC fan.

Turn On/Off the Unit

Turn on the unit by pressing the main power switch to "RESET" position. At the moment, the CFL output receptacles are not powered on yet, but there will be output power on USB charger ports and 12VDC connector. If connecting to utility before, CFL output receptacles

will be automatically turned on. If not, please press "CFL On/Off" switch to turn on the CFL output receptacles. Turn off the unit by pressing again the power switch.

Indicators Table for Operation

LED	Condition	Visual Condition
Charging status indicator	Battery is charging by AC utility.	Green LED flashing every 3 seconds
	Battery is charging by solar panel.	Green LED flashing every 5 seconds
	Charging is complete.	Green LED lighting
Battery status indicator	Battery power is sufficient.	Yellow LED lighting
	Battery power is low.	Yellow LED flashing
Fault indicator	Fault occurs.	Red LED lighting

4. Important Safety Warning (SAVE THESE INSTRUCTIONS)

CAUTION! To prevent the risk of fire or electric shock, install in a temperature and humidity controlled indoor area free of conductive contaminants. (See the specifications for the acceptable temperature and humidity range.)

CAUTION! To reduce the risk of overheating the unit, do not cover the cooling vents of this unit and avoid exposing the unit to direct sunlight or installing the unit near heat emitting appliances such as space heaters or furnaces.

CAUTION! Do not attach non-computer-related items, such as medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to the unit.

CAUTION! Do not plug the unit input into its own output.

CAUTION! Do not allow liquids or any foreign object to enter inside of this unit. Do not place beverages or any other liquid-containing vessels on or near the unit.

CAUTION! In the event of an emergency, press the OFF button and disconnect the power cord from the AC power supply to properly disable the unit.

CAUTION! Do not attach a power strip or surge suppressor to the unit.

Attention hazardous through electric shock. Also with disconnection of this unit from the mains, hazardous voltage still may be accessible through supply from battery. The battery supply should be therefore disconnected in the plus and minus pole at the quick connectors of the battery when maintenance or service work inside the unit is necessary.

CAUTION! Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.

CAUTION! When replacing the batteries, use the same number and type of batteries.

CAUTION! Internal battery voltage is 12VDC. Sealed, lead-acid, 6-cell battery.

CAUTION! Do not dispose of batteries in a fire. The battery may explode. Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes.

CAUTION! Unplug the unit prior to cleaning and do not use liquid or spray detergent.

CAUTION! A battery can present a risk of electric shock and high short circuit current. The following precaution should be observed before replacing batteries:

- 1) Remove watches, rings, or other metal objects.
- 2) Use tools with insulated handles.
- 3) Wear rubber gloves and boots.
- 4) Do not lay tools or metal parts on top of batteries.
- 5) Disconnect charging source prior to connecting or disconnecting batteries terminal.

5. Trouble Shooting

Use the table below to solve minor problems.

Problem	Possible Cause	Solutions
No LED display on the front panel.	Low battery.	Charge the unit at least 8 hours.
	Battery fault.	Replace the battery with the same type of battery.
	The unit is not turned on.	Press the power switch again to turn on the unit.
No solar energy input during daytime.	Wires are not firmly connected.	Check if all wires are connected properly.
	Solar module defect.	Check solar modules or call local dealer to replace solar modules.
Back-up time is shorten.	The unit is overload.	Remove excess loads.
	Battery voltage is too low.	Charge the unit at least 8 hours.
	Battery defect. It might be due to high temperature operation environment, or improper operation to battery.	Replace the battery with the same type of battery.

6 Specifications

Model	Lighting Unit	
CAPACITY	70W	
AC INPUT		
Voltage	230VAC	
Voltage Range	100VAC ~ 300VAC	
Frequency	50 Hz or 60 Hz	
PV INPUT		
Max. DC Power	24W	
Max. DC Voltage	30Vdc	
CFL OUTPUT		
Rated Power	30W	
Voltage	160-230VDC+/-10%	
DC OUTPUT		
USB	5V/1A	
DC Connector	12VDC/2A	
BATTERY		
Type & Number	12 V / 7 Ah x 1 (Built-in)	External battery bank
Charging Time	8 hours recover to 90% capacity	
PHYSICAL		
Dimension (DxWxH)	201 X 110 X 131 mm	
Net Weight (kgs)	3.0	0.9
Environment		
Humidity	0-90 %	
Temperature	0-40°C (non-condensing)	