

# MAPLE SOLAR SYSTEM USER MANUAL

MODEL: CSFD-3-S / CSFD-5-S

## 1.0 USER PRECAUTIONS

To prevent personal injury, injury to others, or damage to property, please comply with the following instructions. Improper use of the system may cause harm or damage.

After switching the lamp starter switch to "green", please recharge the lamp every two weeks to optimize battery performance. When not using the lamp, please switch the lamp starter switch to "red".

**Do not** expose any part of the product to rain or immerse it in water.

**Do not** drop or throw the product.

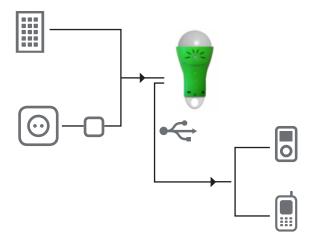
**Do not** place the product near explosive or flammable objects.

Do not disassemble the product.

- A maximum of one electronic device may be connected to the charger at any one time to avoid overheating.
- Charge Maple LED lamps using a 5 V AC/DC adapter or solar module in the Maple Solar System.
- Do not hang any objects over the wire when the module is connected to the lamp.

# 2.0 OVERVIEW

The Maple Solar System is a multifunctional device that functions as both a light source and charger. The lamp can be charged via a module or an AC/DC adapter (not included). The charging component has a USB outlet and can charge most common electronic devices. The Maple Solar System comes with a 3/5 W solar panel and 1 or 2 LED lamps. Users can change the brightness of the lamp by pressing the lamp button. Other features include a battery status indicator, which alerts users when the battery is low on power and needs to be recharged. Finally, the internal battery management system has integrated safety measures to control issues related to heating, battery charge and electric current.



# 3.0 FEATURES

- LED lamp with three modes of adjustable brightness: 30/60/120 lumen.
- USB charging capabilities (suitable for small electronic devices: iPod, mp3, cell phone, etc.)
- Integrated controller has the following safety features:
  - Battery overcharge protection
  - Battery over-discharge protection
  - Battery reverse polarity protection
  - Battery low voltage warning
  - PV reverse polarity protection
  - Anti-reverse charging protection
  - USB overload protection
  - USB short circuit protection



| Item                               | CSFD-3-S  | CSFD-5-S         |  |  |
|------------------------------------|---|------------------|--|--|
| PV<br>MODULE                       | 157 x 186 x 16 mm   | 260 x 182 x 16mm |  |  |
|                                    | 1 PV module included with 0.8 m cable   |                  |  |  |
| Lamp                               |   |                  |  |  |
|                                    | 1 lamp  | 2 lamps          |  |  |
| Cell phone<br>charging<br>adapters | a Dime-   |                  |  |  |
|                                    | 1 standard USB cable which can be directly connected to the original cell phone charg |                  |  |  |

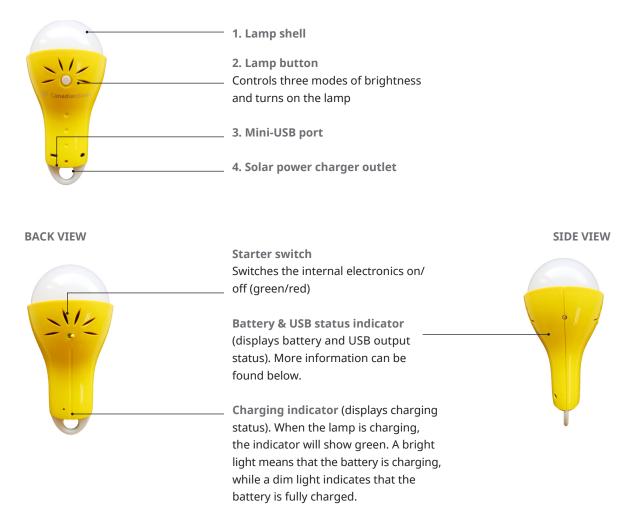
# 5.0 PRODUCT SPECIFICATIONS

| Item                               | CSFD-3-S   | CSFD-5-S      |  |
|------------------------------------|--|---------------|--|
| PV module                          | 3 Wp, 5.5 Vdc  | 5 Wp, 5.5 Vdc |  |
| Battery capacity                   | Li-ion Battery 3.6 V 2 * 2200 mAh per lamp   |               |  |
| Lamp                               | Adjustable brightness 0.5 w / 1 w / 2 w (30 / 60 / 120 Lumen)                          |               |  |
| Charging time                      | Approx. 8 h  | Approx. 5 h   |  |
| Lifecycle of fully charged battery | 0.5 W mode :up to 24 hours;<br>1 W mode: up to 13 hours;<br>2 W mode: up to 6.5 hours; |               |  |
| Weight                             | 0.9 kg   | 1.6 kg        |  |
| Operating temperature              | 0°C ~ 45°C   |               |  |
| Operating humidity                 | 0%~80%   |               |  |

\*Based on the following charging conditions: 1kW/m², AM1.5, 20°C

## 6.0 QUICK GUIDE

#### **FRONT VIEW**



# 7.0 INSTALLATION AND OPERATION

|  |  | N/2  |  |  |
|--|--|--|--|--|
| Step1:<br>Installing the module:<br>Position the module so<br>that it directly faces the<br>sun. | Step 2:<br>Charging the lamp:<br>Connect the module<br>wire to the solar power<br>charging outlet. | Step 3:<br>Starting the system:<br>Switch the starter<br>switch to "green".<br>The starter switch will<br>initiate the internal<br>electronics. The system<br>can now be operated<br>normally. | Step 4:<br>Turning on/adjusting<br>the lamp:<br>Push the button once to<br>turn on the lamp and<br>activate the 0.5 W mode.<br>Pushing the button twice<br>will put it into 1 W mode,<br>and three times into<br>2 W mode. To turn off<br>the system, switch the<br>starter switch to "red". | Step 4-2:<br>Charging electronic<br>devices:<br>Connect one end of<br>the USB charging cable<br>to the mini USB port<br>and the other end of<br>the cable to the desi-<br>red electronic device. |

## BATTERY & USB STATUS INDICATOR EXPLANATIONS:

- A. Flashing yellow means that the battery voltage is low; please charge the lamp, reduce power consumption by switching to 0.5 W/1 W mode or disconnect any plugged-in electronic device.
- B. Flashing red means that the connected USB device has overloaded or short-circuited; please disconnect the USB connection or reduce the load.
- C. Red display for approx. 2 seconds (after pushing the lamp button) means that the battery is completely empty; please charge the lamp.

| Part  | Problem   | Solution   |  |
|---|---|--|--|
| Lamp  | The lamp does not light up after its button is pressed  | Make sure that the starter switch is switched to "Green"   |  |
| Q   | The lamp does not light up after its<br>button is pressed and the battery<br>& USB status indicator remains red<br>for approx. 2 seconds                  | This means the battery is empty;<br>please charge the lamp   |  |
| USB port for charging<br>electronic devices | The electronic device is not charging   | Make sure that the lamp starter switch<br>is switched to "green". Check that<br>the connecting wires are connected<br>properly                     |  |
|   | The electronic device is not charging<br>and, when the lamp button is pressed,<br>the battery & USB status indicator<br>remains red for approx. 2 seconds | This means that the system battery is empty; please charge the lamp  |  |
|   | The electronic device is not charging<br>and, when the lamp button is pressed,<br>the battery & USB status indicator<br>flashes yellow                    | This means that the battery voltage is<br>low; please charge the lamp  |  |
|   | The electronic device is not charging,<br>and the battery & USB status indicator<br>is flashing red.  | This means that the connected USB de-<br>vice has overloaded or short-circuited;<br>please disconnect the USB charging<br>cable or reduce the load |  |
| Solar module<br>charging outlet             | The lamp is connected to the solar<br>module but the charging indicator is<br>not displaying anything.  | Make sure that the PV module and<br>lamp are properly connected, and that<br>the PV module is exposed to direct<br>sunlight.                       |  |
|   | The charging indicator is displaying a dim light when the sun is shining  | This means that the battery is fully charged   |  |

#### TROUBLESHOOTING

## 8.0 WARRANTIES

- The system comes with a one-year limited warranty for the lamp system and a 10-year performance warranty for 90% of the minimum rated power output for PV modules. The warranty shall be effective from the purchase date or forty (40) days after delivery by Canadian Solar Inc., whichever comes first.
- The limited warranties do not cover normal wear and tear or misuse, or any damage caused as a result of abusing, altering, improperly installing or using the system, unauthorized servicing, modifying, storing and transporting, or damage caused by power failures, natural disasters or other events that lie beyond Canadian Solar's control.

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