



SOLAR POWER SOLUTIONS

*Betta.Life.Light*

[www.bettalights.com](http://www.bettalights.com)

# SOLAR POWERED LED LIGHTING SOLUTION

For Game Lodges, Farming Communities, Rural Villages, Off-Grid & Low Cost Housing

**Standard Configuration**  
5 x LED Lights,  
Upgradeable to  
8 x LED Lights

Powered by  
Environmentally Friendly  
Lead Crystal  
Batteries



**BRIGHTNESS = 15LUX per LED Light**

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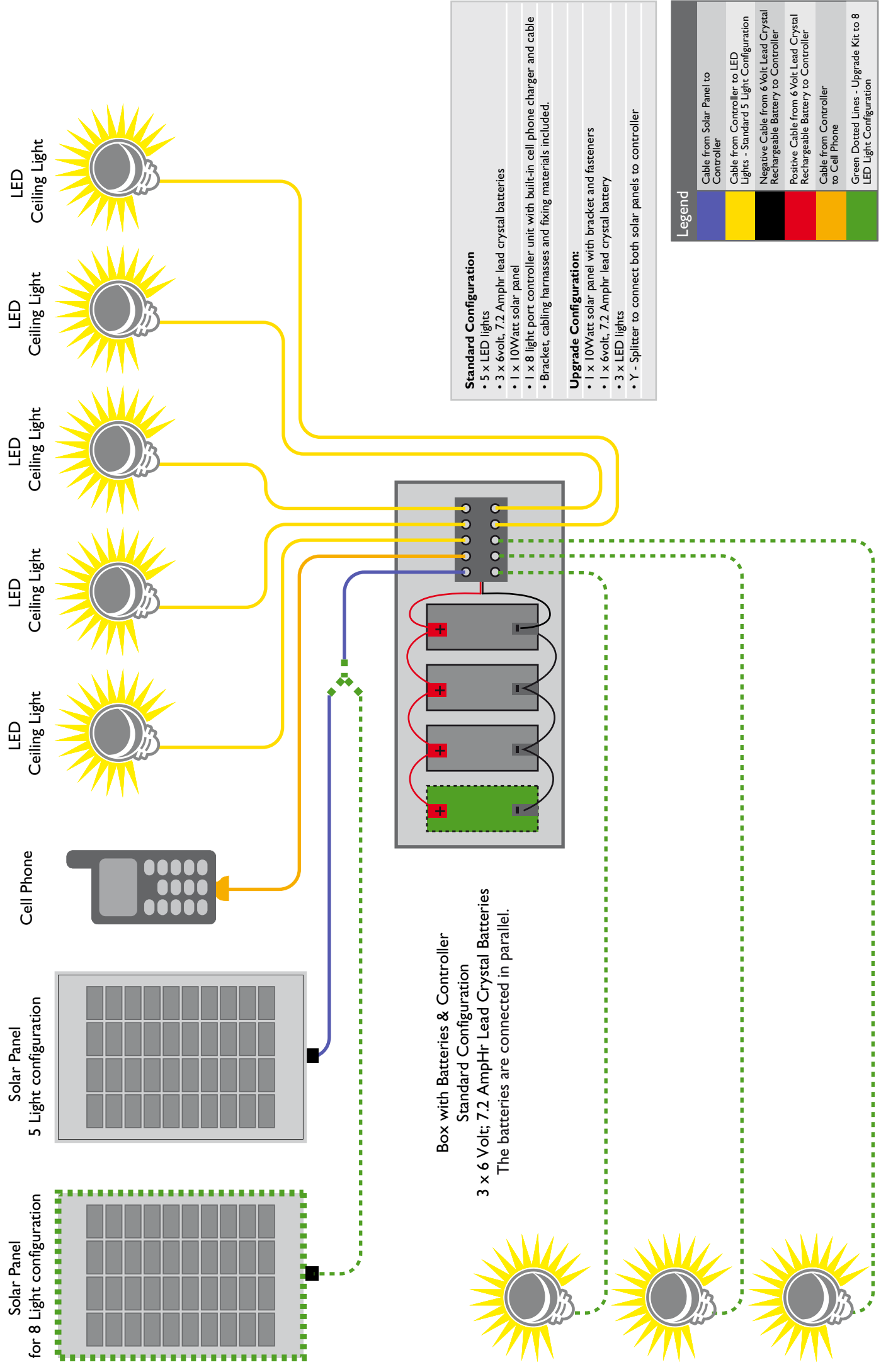
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FIG. 1

DIAGRAM - STANDARD 5 LIGHT CONFIGURATION WITH UPGRADE TO 8 LIGHT CONFIGURATION



Solar Panel  
for 8 Light configuration

Solar Panel  
5 Light configuration

Cell Phone

LED Ceiling Light

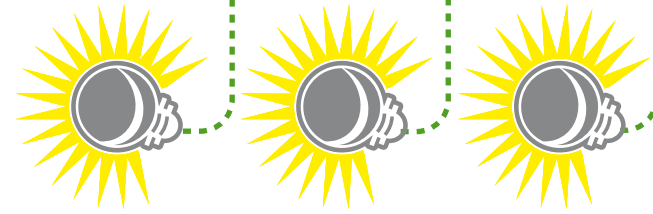
LED Ceiling Light

LED Ceiling Light

LED Ceiling Light

LED Ceiling Light

Box with Batteries & Controller  
Standard Configuration  
3 x 6 Volt; 7.2 AmpHr Lead Crystal Batteries  
The batteries are connected in parallel.



- Standard Configuration**
- 5 x LED lights
  - 3 x 6volt, 7.2 AmpHr lead crystal batteries
  - 1 x 10Watt solar panel
  - 1 x 8 light port controller unit with built-in cell phone charger and cable
  - Bracket, cabling harnesses and fixing materials included.
- Upgrade Configuration:**
- 1 x 10Watt solar panel with bracket and fasteners
  - 1 x 6volt, 7.2 AmpHr lead crystal battery
  - 3 x LED lights
  - Y - Splitter to connect both solar panels to controller

**Legend**

Blue	Cable from Solar Panel to Controller
Yellow	Cable from Controller to LED Lights - Standard 5 Light Configuration
Black	Negative Cable from 6 Volt Lead Crystal Rechargeable Battery to Controller
Red	Positive Cable from 6 Volt Lead Crystal Rechargeable Battery to Controller
Orange	Cable from Controller to Cell Phone
Green Dotted	Green Dotted Lines - Upgrade Kit to 8 LED Light Configuration



**LED Light**

**Standard 5 Light Configuration:**

The **Betta. Life.Light** bulb consists of 22, Light Emitting Diodes, (LED's) housed in a rugged molded bulb with Perspex protective cover, for excellent light distribution. The standard configuration, contains 5 LED bulbs with light socket holders and pull switches

**Upgrade To 8 Lights:**

The Upgrade kit contains 3 LED lights with light holders and pull switches.

The brightness of the light is equal to a 60 watt incandescent light bulb. One LED light will effectively cover a room area of 9 sqm to 12 sqm. With the 5 LED lights used simultaneously, the lights can function continuously for 25 hours, and is scaled to supply 5 hours of light per night in adverse weather conditions. Each LED light uses only 1Watt of energy. The cabling length between controller and the light holders is 10 meters.



**Battery Box**

**Standard 5 Light Configuration:**

The standard configuration for 5 lights is supplied with 3 x 6Volt 7.2 Amphr lead crystal batteries. The molded battery box can house up to 5 x 7.2 Amphr batteries. All battery cabling is included.

**Upgrade Kit To 8 Lights:**

The upgrade kit includes an additional 1 x 6Volt 7.2 Amphr lead crystal battery.

The lead crystal batteries have a shelf life of 2 years, an expected life of 10 years, can be recharged 3 to 5 x faster than deep cycle batteries and can be discharged completely with a successful recovery thereafter.



**Battery Box & Controller Unit**

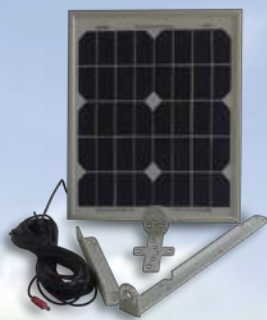
**Standard 5 Light Configuration:**

The standard 5 light solution has 8 x light ports built-into the controller.

**Upgrade Kit To 8 Lights:**

The upgrade kit is supplied without any additional controller units, as the 5 light solution already has 8 ports.

The intelligent controller unit is built-into the battery box for easy installation. All the cabling plugs into the controller unit and is coded with blue/red/black colors to support the "Do It Yourself" plug and play installation concept. Red = solar panel, Blue = cell phone charger and Black = LED lights. The controller also regulates the charge and discharge of the batteries and disables the lights' function during day time to reduce the risk of a flat battery, due to lights being left on during the day. The controller has 8 x LED light ports, 1 x Solar panel port and 1 x Cell phone charger port.



**Solar Panel & Mounting Brackets**

**Standard 5 Light Configuration:**

The standard Betta.Life.Light 5 LED light solution is supplied with a 10Watt PV solar panel with all the relevant fasteners and brackets. The cable length between the solar panel and controller is 12 meters.

**Upgrade Kit To 8 Lights:**

The upgrade kit to an 8 LED light solution is supplied with an additional 10 Watt solar panel with its fasteners, bracket and Y – connector. The cable length between the solar panel and controller is 12 meters.



**Cell Phone Charger**

The system has a port on the controller to charge a cell phone. Most popular cell phone connectors are supplied with the package for ease of use and to cater for a vast amount of cell phone models.

## BETTA LIFE LIGHT

The Betta.Life.Light takes advantage of the abundance of sun for communities living in small houses with a typical area of 50m<sup>2</sup> up to 90m<sup>2</sup> with no or unaffordable electricity. The Betta.Life.Light utilizes energy efficient LED lighting elements combined with state of the art solar panels and batteries.

The lights function up to 25 hours should all 5 lights be switched on simultaneously with no available sunlight for whatever reason.

The product is easy to install (Do It Yourself) and carries a 12 months guarantee. The system is supplied with 5 ceiling mounted LED lights and can be upgraded to an additional 8 LED Lights.

## THE PRODUCT CONSISTS OF THE FOLLOWING COMPONENTS:

- ① 1 x solar panel to be installed, outside of the house to generate electricity from sunlight.
- ② 1 x controller unit that integrates the solar panel, the wiring harness, battery and lights.
- ③ 5 x ceiling mountable LED lights that will last for years and use minimum power to generate light.
- ④ 1 x wiring harness set connects the lights, solar panel and the controller unit. The harnesses are long enough to reach all areas within a small house.
- ⑤ 1 x cell phone charger unit with the most popular connection points.
- ⑥ 1 x set of mounting brackets and fastening elements.
- ⑦ 3 x 6V Rechargeable Lead Crystal Batteries
- ⑧ 1 x Battery Controller Box

## QUESTIONS & ANSWERS

**Q)** How long can the lights work if the batteries are fully charged?

**A)** If all 5 lights are used simultaneously, the lights can function for 25 hours continuously.

**Q)** Why 25 hours if the lights are only used for a maximum of 6 hours per night?

**A)** The system design considers the fact that the lights may be used longer if required and that may be followed by a clouded day or short winter day. To ensure availability of lights, always switch lights off when not in use.

**Q)** Is the battery charged if it is overclouded?

**A)** Yes, but the batteries are charged at a lower rate.

**Q)** Can the system drive household appliances?

**A)** No, only the supplied cell phone charger.

**Q)** Can the system function during the day?

**A)** The system switches off during the day to charge the battery and to prevent the battery from running flat if the lights are left on.

**Q)** Can other light bulbs be used in Betta Life Light?

**A)** No, the Betta Life Light LED lights are specially designed for this application.

**Q)** Can the light bulbs be used with other power sources?

**A)** Yes, if the power source is 6 Volt Direct Current.

**Q)** What is the expected battery life?

**A)** 3 years expected life.

**Q)** If the batteries are defective, can I replace them with batteries purchased from the local store?

**A)** Yes, provided that it is a 6 volt 12Ahr battery.

**Q)** Is the Betta.Life.Light System Upgradeable?

**A)** The system is upgradeable from the standard 5 lights to an 8 lights solution. The standard solution comes with an 8 port controller unit and the battery box also makes provision for an additional 2 batteries.

**See Fig. 1** Circuit Diagram and

**Fig. 2** for Perspective Diagram

## BETTA LIGHTS FOR A BETTA LIFE

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