



SOLAR POWER SOLUTIONS

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

Betta.Life.Light

# SOLAR POWERED LIGHTS

For Low Cost Housing, Informal Housing,  
Remote Villages & Farming Communities

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

Powered by  
Environmentally Friendly  
Lead Crystal  
Batteries



**BRIGHTNESS = 15LUX per LED Light**

**Betta Lights (Pty) Ltd**

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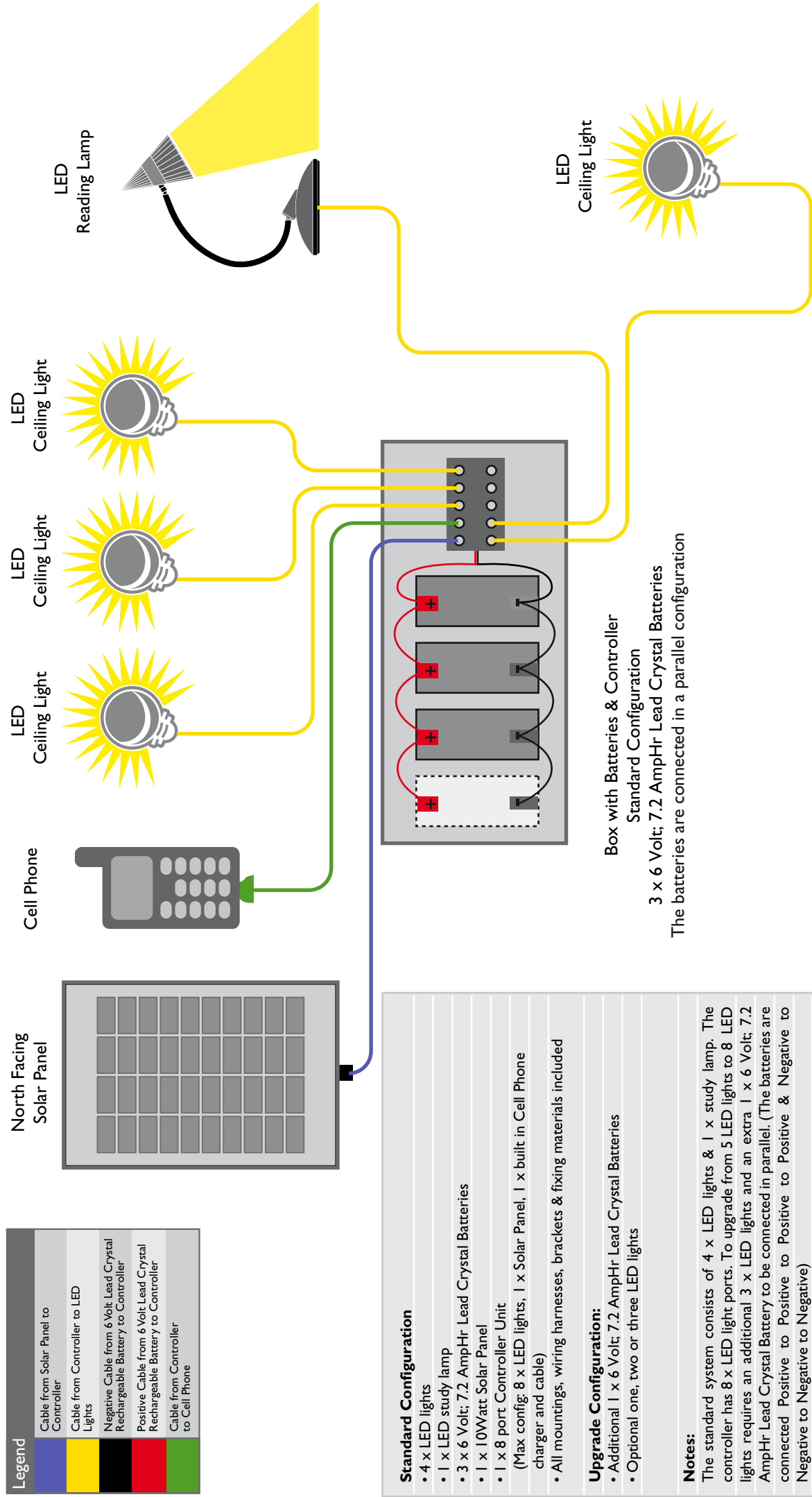
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FIG. I

CIRCUIT DIAGRAM - STANDARD CONFIGURATION



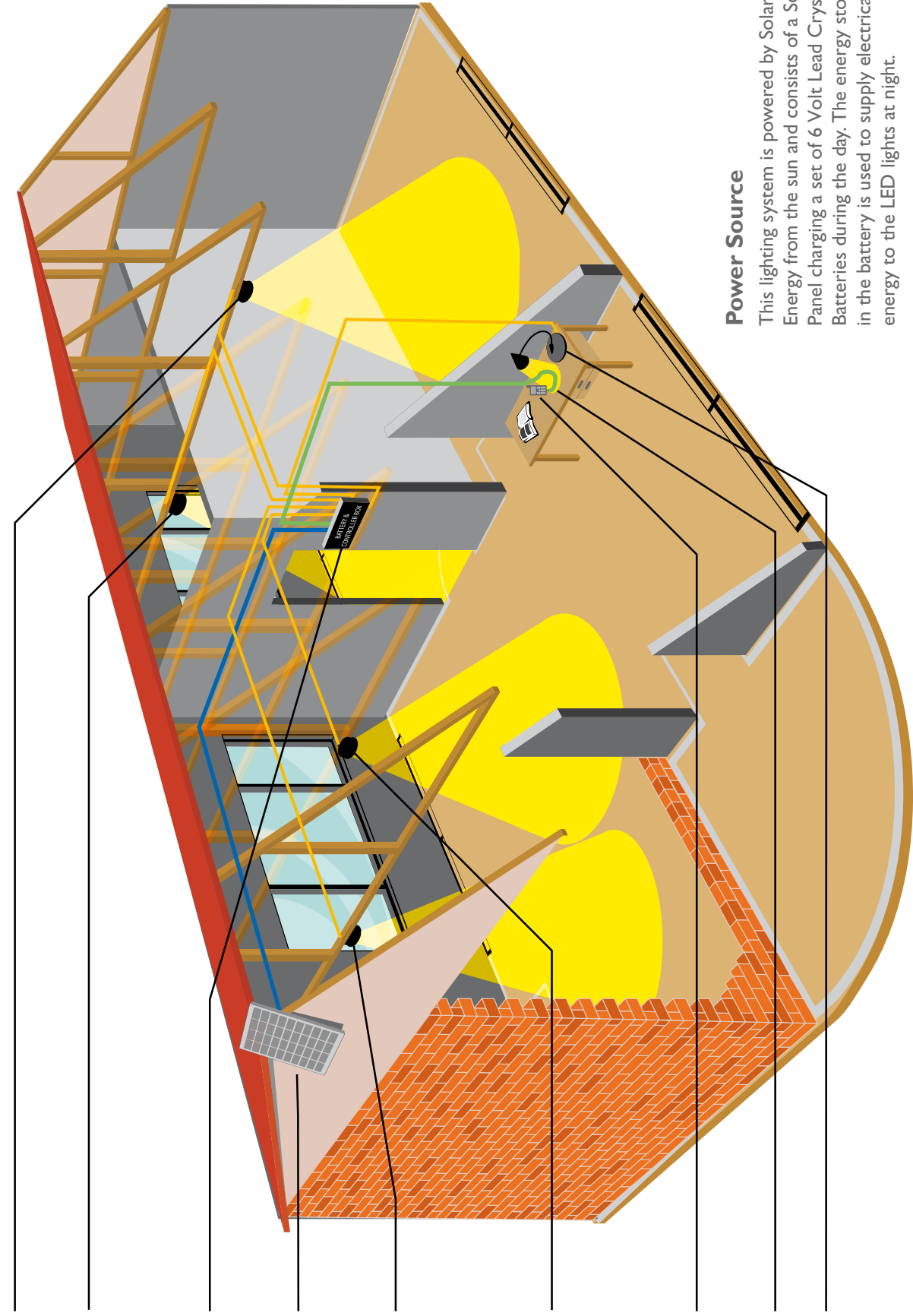
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**FIG. 2** PERSPECTIVE DIAGRAM - STANDARD CONFIGURATION



LIGHT FITTING & LED BULB

LIGHT FITTING & LED BULB

6V RECHARGEABLE BATTERIES & CONTROLLER IN BATTERY BOX

SOLAR PANEL (NORTH FACING IN SOUTHERN HEMISPHERE & SOUTH FACING IN NORTHERN HEMISPHERE)

LIGHT FITTING & LED BULB

LIGHT FITTING & LED BULB

CELL PHONE

CELL PHONE CHARGER POINT

STUDY LAMP

**Legend**

Cable from Solar Panel to Controller

Cable from Controller to LED Lights

Cable from Controller to Cell Phone



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**Power Source**

This lighting system is powered by Solar Energy from the sun and consists of a Solar Panel charging a set of 6 Volt Lead Crystal Batteries during the day. The energy stored in the battery is used to supply electrical energy to the LED lights at night.



## BETTA.LIFE.LIGHT

The Betta.Life.Light takes advantage of the abundance of sun in Africa for communities living without the luxury of electricity. The product is designed for dwellings with an area of 50m<sup>2</sup> - 70m<sup>2</sup>. The Betta.Life.Light utilizes energy efficient LED lighting elements combined with state of the art Solar Panels and Lead Crystal Batteries.

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

The product is easy to install (DIY) and carries a 12 month conditional guarantee. The standard system includes 4 x ceiling mounted LED lights and a LED reading lamp to facilitate studying. The standard system can be upgraded with an optional one, two or three LED lights and additional batteries.

## THE PRODUCT CONSISTS OF THE FOLLOWING COMPONENTS:

- ① 1 x 10 Watt Solar Panel to be installed facing North in the Southern Hemisphere, outside of the house to generate electricity from sunlight.
- ② 1 x Controller Unit that integrates the Solar Panel, the wiring harness, batteries, lights and controls 8 x LED light ports, 1 x Cell Phone charger port and a Solar Panel port.
- ③ 4 x Ceiling mountable LED lights and LED reading lamp, can be upgraded to 8 x 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 wiring is long enough to reach all areas within a small house.
- ⑤ 1 x Set of mounting brackets and fastening elements.
- ⑥ 3 x 6 Volt; 7.2 AmpHr Lead Crystal Batteries for the standard configuration of 5 LED lights.
- ⑦ 1 x Wall mounted Battery and Controller box

## FREQUENTLY ASKED QUESTIONS

- Q) How long can the lights work if the batteries are fully charged?
- A) With 5 LED lights (Standard Configuration) 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 occasionally followed by a cloudy 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 cloudy?
- A) Yes, but the batteries are charged at a very low rate.
- Q) Can the system drive household appliances?
- A) No, only the supplied Cell Phone charger inside the Controller Box.
- Q) Can the system function during the day?
- A) The system switches off the lights during the day to allow for charging of the battery, thus preventing the battery from running flat if 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 Betta.Life.Lights be used with other power sources?
- A) Yes, if the power source is 6 Volt direct current.
- Q) What is the Lead Crystal Batteries' expected life?
- A) 7-10 years.
- Q) If the batteries are defective, can I replace them with batteries purchased from the local store?
- A) Yes, provided it is a 6 volt Lead Crystal Battery.
- Q) What should one do, to always ensure maximum system performance?
- A) Switch the lights off when not in use and clean the Solar Panel regularly.
- Q) Can the system be upgraded?
- A) The System comes standard with 4 x LED Lights and 1 x LED Reading Lamp. The system can be upgraded to a maximum of 8 x LED lights.
- Q) What is the measurable brightness of each LED light?
- A) 15LUX per LED light, in a 9m<sup>2</sup> room, approximately the equivalent of a traditional 60 Watt incandescent light bulb or 11Watt CFL energy saver bulb.

See Fig. 1 Circuit Diagram & Fig. 2 for Perspective Diagram

## BETTA LIGHTS FOR A BETTA LIFE



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