

# Solar LED Emergency Light

Model: EL-03 6v

These lanterns are a viable solution to replace Kerosene Lamps. Kerosene lamps are costly, inefficient, and provide poor lighting. It can be charged by solar panel and is AC grid compatible for emergencies.

It is cost effective and long lasting as compared to earlier solar lighting systems. We have developed it in such a simple way that a village person can operate & maintain this after short training

Uses the world's most efficient LEDs when fully charged it will provide up to 12 hours of bright light. The lamp gives an even white light that is projected at wide angle - it is able to effectively illuminate a rural household with a room size of 4m x 4m.

It is 8 - 10 times brighter than a kerosene lantern and 30 - 50% more efficient than fluorescent lights. Though there is subsidy provided by the government on Kerosene still kerosene lamp is expensive as compared to the solar lighting system that we have developed. Based on our calculation we assure that the pay back period for the system is approx 1½ year.

## Features

- Advance Japanese Circuit balancing an optimum high brightness with extended battery life
- Solid state High Power LED with 50,000 hours of life
- Powered by 6volts 4AH SMF Lead Acid battery easily available for future replacement
- Inbuilt Charge Controller for solar panel charging.
- 2watt Mono / Poly crystalline Solar Panel
- Optional AC charging recharges at very low voltage ( range from 110v to 240v)
- Smart Battery Indicator that allows the user to manage his power effectively
- Two brightness level settings for different tasks.



The main obstacle in interiors we have faced as on date is to provide service for maintenance of solar systems. LEDON has taken initiative to train Self Help Groups to manufacturer Solar Led Lanterns, Solar LED Home Light, Solar LED / CFL Street Lights and LED Torches. Operating through SHGS the basic problem of maintenance of solar systems was solved. Also LEDON has provided full time employment to 25 local people. By generating work for local people we are mutually benefited and looking forward to start more Self Help Groups in other villages.

## Technical Specifications:

<b>Model No.</b>	<b>EL-03 6v</b>
<b>General</b>	
Application	Solar powered household Lanterns
Duty Cycle	16-18 hours
System Voltage	6 Volt DC
Number of Days of autonomy	3 – 4 days
<b>SPV Module</b>	
Module Type	Mono / Poly Crystalline Silicon
Module Power	2 watt panel
Open Circuit Voltage (Voc)	>/= 10.5 volt
Optimum Operating Voltage (Vmp)	8.6 volt
<b>Battery</b>	
Type	VRLA SMF Lead Acid
Battery Voltage	6 volt
Battery Capacity	4.0AH
<b>LED Lamp</b>	
Lamp Type	RoHS Compliant Super Flux LED
Rated Light output (Lumens)	160 Lumens at 350mA
Lamp Color Temperature	6500K Cool White
Rated Lamp average life	60,000 Hrs approx
Lamp Starting	Soft Start
<b>LED Driver</b>	
Type	Constant Current, Pulse Width Modulation (PWM) ,Buck Boost
Operating Voltage	6 – 15 Volt
Efficiency	Above 92% @ full load
Switching Frequency	1.6 MHz
Output	1000mA Constant Current
Operating Temperature	0 to 60 degree C
Protection	Low Power Shut Down, Broken / Open LED Protection, Thermal Shut Down, Reverse Polarity
<b>Charge Controller</b>	
Charge Controller Type	Electronically regulated boost and float charge, PWM regulation
Normal Voltage	8.5 Volt
Charge Controller Efficiency	>92%
Self Power Consumption	4ma
Max Load Current	1A
Indication	Charging and Low battery
Protection	Overcharge, Deep Discharge, Over Load and Short Circuit at Load, Panel Surge Voltage, Wrong polarity at Panel or Battery

\*specifications are subject to change without prior notice.