

Solar Led Home Light System

Model: HL12v7ah

Solar Home lighting system is an excellent solution for household electrification in rural and interior areas where electricity is always in scarcity. **LEDON** Solar Home Light system is based on a simple technology. 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. It can be charged by solar panel and is AC grid compatible for emergencies.

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 compare to the solar lighting system that we have developed. Based on our calculations we assured that the pay back period for the system is approx 1½ year.

Features

- Advance Constant Current PWM Circuit balancing an optimum high brightness in each LED Bulb
- Solid state High Power LED (120Lm) with 50,000 hours of life
- Powered by 12volts 7AH SMF Lead Acid battery easily available for future replacement
- Inbuilt Advance Charge Controller for extended battery life.
- 8 watt Mono / Poly crystalline Solar Panel
- Smart Battery Indicator that allows the user to manage his power effectively



LED Home Light System with two LED DC Bulbs and 8 watt Solar Panel

The main obstacle in interiors we have faced as on date is providing service for maintenance of solar systems. **LEDON** has taken initiative to train **Self Help Groups** to manufacture Solar Led Lanterns, Solar LED Home Light, Solar LED / CFL Street Lights and LED Torches. Operating through SHG 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:

Model No.

General

Application	Village electrification, Standby light source
Duty Cycle	10 - 12 hours
System Voltage	12 Volt DC
Number of Days of autonomy	3 days

SPV Module

Module Type	Mono / Poly Crystalline Silicon
Module Power @ 16.4V @STC	8 to 10 watt panel (As per the requirement)
Open Circuit Voltage (Voc)	>= 21 volt

Battery

Type	VRLA SMF Lead Acid
Battery Voltage	12 volt
Battery Capacity	7AH
Battery Box	MS Sheet, Power coated

LED Lamp

Lamp Type	RoHS Compliant Solid State High Power LED
Rated Light output (Lumens)	90 to 100 Lumens at 350mA
Lamp Color Temperature	6500K Cool White
Rated Lamp average life	60,000 Hrs approx
Lamp Starting	Soft Start

LED Driver

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

Charge Controller

Charge Controller Type	Electronically regulated boost and float charge, PWM regulation
Nominal Voltage	12 Volt
Charge Controller Efficiency	>92%
Self Power Consumption	4ma
Max Load Current	4A
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
