

Solar CFL Lantern

Solar Lantern is a device that operates using the light energy available from sun to provide lighting during night time. Solar Lantern is a reliable, efficient and an ideal portable lighting system for illumination anytime, anywhere especially in areas that are not connected to the power grid. This fully integrated system combines the latest and most innovative technologies available.

Elumina - 07

Elumina-07 is a Portable Solar lighting system comprises of one Solar Lantern using Compact Fluorescent Lamp (CFL) of 07 Watt as a light source, rechargeable lead acid battery for storage, PV modules for charging the battery, suitable electronics for the operation of the lamp and safe charging and discharging of the battery.

Advantages

Solar Lantern is 8-10 times brighter than a kerosene lamps a viable solution to replace them. Kerosene lamps are costly, polluting, inefficient, and provide poor lighting. Though there is subsidy provided by the government on kerosene still kerosene lamp is expensive compare to the Solar Lantern. Based on our calculation we assure that the pay back period for the system is approx 1½ year.

It is cost effective and long lasting as compared to earlier solar lighting systems. It can be charged by solar panel and is AC grid compatible for emergencies. We have developed it in such a simple way that a village person can operate and maintain this after short training.

Features

- Ideal portable lighting system
- Bright, Omni-directional pure white light - anytime, anywhere
- Charging via Solar Module or AC Mains using optional Charger
- Uses non polluting, inexhaustible energy from the Sun
- Adequate protections and indications
- Highly efficient charge controller and Inverter
- Rugged and attractive body made of ABS plastic



Elumina – 07
7 watt CFL Solar Lantern

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 manufacture 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:

Model No.	Elumina – 07 watt
General	
Application	Portable lighting System
Duty Cycle	3-4 hours
System Voltage	12 Volt DC
SPV Module	
Module Type	Mono / Poly Crystalline Silicon
Module Power @ 16.4V	8 watt, 10 watt panel
Open Circuit Voltage	>= 21 volt
Battery	
Type	VRLA SMF Lead Acid
Battery Voltage	12 volt
Battery Capacity @ C/10	7AH
Lamp	
Lamp Type	07 watt Compact Fluorescent Lamp, 4 Pin, Single U
Rated Light output (Lumens)	400 (+ - 5%)
Lamp Color Temperature	5200K Day light
Rated Lamp average life	8000 Hrs approx
Light Coverage	360 Degrees
Lamp Current @ Inverter Frequency	165mA – 190mA
Lamp Power @ Inverter Frequency	6.5 watt
Inverter	
Inverter Type	Quasi Sine Wave
Inverter Frequency	24-28 Hz
Inverter Efficiency	> %82
Power Consumption @12V DC	8 watt +- 10%
Lamp Starting	Soft Start
Preheating Time	1.0 to 1.8 seconds
Power Consumption @ 12V DC	13.5watt (+ - 10%)
Charge Controller	
Charge Controller Type	Electronically Regulated PWM boost and float charge
Charging Current	4A Max
Charge Controller Efficiency	>92%
Idle Consumption	<4ma
Indication	Charging and Low battery
Protection	Overcharge, Deep Discharge, Reverse polarity, Module reverse current flow, overload