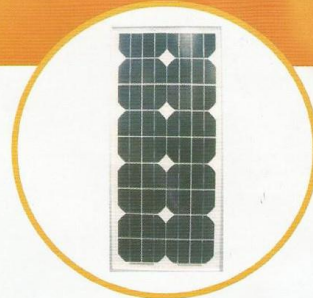


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# SOLAR LANTERN

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## Introduction

Solar photo voltaic lantern is a lighting system consisting of CFL, battery & high efficient electronics all placed in a suitable compact enclosure made of plastic along with an external solar photovoltaic module. The battery is charged by electricity generated by the PV module the lantern is portable lighting device suitable for either indoor or outdoor lighting covering a full range of 360. The solar portable lantern is a quiet, rechargeable battery power source designed for small remote lighting needs. The solar portable lantern is housed in a compact looking enclosure with handles for convenient carrying & utilizes state of art solar technology for battery charging.

A solar lantern is a simple application of solar photo voltaic technology, which has a preferred alternative during power cuts because of its simple mechanism. A solar lantern is made of three main components the solar PV panel, the storage battery & the CFL. The solar energy is converted to electrical energy by the SPV panel & stored in a sealed maintenance free battery for later use during the night hours. A single charge can operates the CFL for about 4-5 hours.

## Salient Features

- Portable & rugged housing
- High quality electronics meeting MNRE,ETDC standards
- Up to 4 hours of operation lighting backup for cloudy day
- Non-polluting & eco friendly
- Available in CFL & led models
- Microcontroller based circuit
- MOV protection at PV side from lightning effect

## SPECIFICATION TECHNICAL

<b>Module rating</b>	<b>12v,10wp</b>
<b>Module type</b>	crystalline
<b>Battery rating</b>	12v/7ah lead acid battery
<b>Type</b>	Sealed maintenance free type
<b>Lamp rating type</b>	7w CFL
<b>Electronics inverter waveform</b>	Quasi Sine wave

<b>Crest factor</b>	<1.7
<b>Lamp preheating</b>	provided
<b>Frequency</b>	20-25 kHz
<b>Efficiency</b>	>90%
<b>No load current</b>	<1ma
<b>Battery low cut off voltage</b>	10.5v
<b>Load reconnect voltage</b>	12.5v
<b>Charging indication</b>	Green
<b>Battery low indication</b>	Red

### Protection

- **No load protection**
- **Short circuit protection**
- **Reverse Polarity, Reverse flow low cut off at 10.5 V**
- **Reconnect Load and Module**
- **Over charge cut off at 14.3 V**



With

