



Note Shown image is just for illustration original may differ

Technical Specifications

Solar PV Modules

Modules Wattage	:	5W
Quantity	:	4 Nos.
Open Circuit Voltage (Voc)	:	10V
Short Circuit Current (Isc)	:	0.60A
Maximum Power Voltage (Vmp)	:	8.80V
Maximum Power Current (Imp)	:	0.57A
Converter	:	Buck & Boost
Sensing	:	Dusk to Dawn
Batteries Voltage	:	6V
Capacity	:	4 Ah
Quantity	:	4 Nos.

LCD

Voltmeter	:	0-40V
Ammeter	:	0-3A

- Dual channel V, I measurement system with PC interface using USB.
- Microcontroller Used : STM32
- Number of Voltage and Current Measurement Channels: 2 channels
- Voltage Measurement Range : 0–36 V DC
- Current Measurement Range : 0–2.5 A
- Supply Voltage : +5 V DC
- Dashboard graphical user interface is provided to see the VI curve by using Solar PV e- learning module Software.

Scope of Learning

- Study of series combination of Solar PV Modules.
- Study of parallel combination of Solar PV Modules.
- Study of series-parallel combination of Solar PV Modules.
- Study of VI Characteristics of Solar PV Module.
- Study of blocking diode and its working in Solar PV Module.
- Study of bypass diode and its working in Solar PV Module.
- Study of the effect of inclination angle of Solar PV Module.
- Study of different charging techniques.
- Study of Buck converter.
- Study of Boost converter.
- Study of the effect of change in solar radiation on Solar PV Module.
- Computer Interface with a dashboard software for VI Characteristics are interfaced with Solar PV e-learning software using animations for training for this experiment
- To measure Open Circuit Voltage and Short Circuit Current
- To measure Maximum Voltage and Current