

# Characteristics of Mono Crystalline and Poly Crystalline Solar Panel

**Model : SE-1106DM**



**SINCOM SE-1106DM Characteristics of Mono Crystalline and Poly Crystalline Solar Panel with Digital Meter** is an impressive, self-contained trainer that allows for the thorough examination of the operation, characteristics of Mono Crystalline and Poly Crystalline Solar Panel and parameters of a solar cell under different conditions. The Mono Crystalline and Poly Crystalline solar cell has gained significant usage across various applications for the purpose of generating necessary power from solar energy. This trainer also includes the capability to apply an artificial variable intensity light source, as well as Digital Voltmeter and Digital Milliammeter.

## Features

- ❖ Mono Crystalline Solar Cell panel with mount
- ❖ Poly Crystalline Solar Cell panel with mount
- ❖ Different Resistive Loads
- ❖ Load Bank selector Rotary switch
- ❖ Square Front
- ❖ Fast response time
- ❖ High photo sensitivity
- ❖ Current controlling resistor in series
- ❖ Artificial light radiation source 100W Lamp with intensity control
- ❖ 3<sup>1/2</sup> Digit Digital DC Volt and Current Indicator
- ❖ In-Built Variable regulated DC Power Supply
- ❖ Presents a multi-color Circuit Diagram printed on the front panel of the white board
- ❖ Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- ❖ Interconnections by 2mm high quality banana sockets and pins.



An ISO 9001:2015 Co.

## Technical Specifications

▪ AC Mains Power Supply	: 230V ±10%, 50Hz
▪ Fixed Regulated DC Power Supply	: +5V /500mA
▪ Variable DC Power Supply	: Variable 0 to +12V
▪ Solar Panel	: One number with mount
▪ Mono Crystalline Solar Cell	: 12V
▪ Poly Crystalline Solar Cell	: 12V
▪ Power	: 3W-10W
▪ Light Source	: 100W Lamp with Variable Intensity control
▪ Front	: Square/Rectangle
▪ Load Bank	: 5 Resistive loads with rotary selector switch
▪ Maximum Forward Current	: 200mA
▪ Maximum Output Voltage	: 12V
▪ Current Controlling Resistor	: MFR 100Ω, ±5% in series
▪ Total Digital Meters	: 02 (1 Voltmeter and 1 Milliammeter)
▪ Digital Voltmeter	: DC 0-20V, Red Color 3 <sup>1/2</sup> Digit LED Display
▪ Digital Milliammeter	: DC 0-200mA, Red Color 3 <sup>1/2</sup> Digit LED Display
▪ Weight	: 3.0 kg (approx.)
▪ Dimensions (mm)	: L 245 x W 320 x H 115
▪ Interconnections	: 2mm Banana sockets
▪ Operating Temperature	: 0-50°C, 80% RH

## Learning Scope

- To study the operation of solar cells.
- To study the Illumination Characteristics of Mono Crystalline Solar PV Panels w.r.t. applied variable light Input.
- To study the Illumination Characteristics of Poly Crystalline Solar PV Panels w.r.t. applied variable light Input
- To study the Power-Load characteristics for the variation of Power and load current w.r.t. change of load resistors for a constant light input for the Mono Crystalline and Poly Crystalline Solar PV Panels.

**Other Instruments Required :** Nil

**Accessories Included :** Solar modules with stand, Light source 100W with intensity control, Set of Patch Cord and Details Instruction Manual.