



STUDY OF SOLAR CELL CHARACTERISTICS APPARATUS

EDUCATIONAL • ACCURATE • RELIABLE

This apparatus is designed to plot and study I-V characteristics of a solar cell under different conditions. It helps in understanding the effect of irradiance on current, voltage and power output of a solar cell.

QUALITY YOU CAN TRUST!

**PRECISION
YOU CAN RELY ON!**



STUDY I-V CHARACTERISTICS

Plot and analyze current-voltage characteristics of solar cell.



VARIABLE IRRADIANCE

Observe the effect of varying light intensity on solar cell performance.



HIGH ACCURACY

Precision meters for accurate measurements of current and voltage.



EDUCATIONAL USE

Ideal for physics laboratories, engineering colleges and research institutions.



RELIABLE & DURABLE

Compact, robust and built with high quality components for long life.

SPECIFICATIONS

Product Name	Study of Solar Cell Characteristics Apparatus
Function	To study I-V characteristics of solar cell
Solar Cell	High efficiency silicon solar cell (mounted on stand)
Panel	Control panel with meters and circuit diagram
Meters	1. Voltmeter (0-20V DC) 2. Milliammeter (0-200 mA DC)
Load	Variable resistance (rheostat)
Light Source	Halogen lamp with reflector and housing
Irradiance Variation	By changing distance between lamp and solar cell
Dimensions (Approx.)	Control Panel: 300 x 200 x 100 mm Solar Cell Stand: Adjustable Lamp Housing: 150 x 120 x 180 mm
Power Supply	230V AC, 50 Hz
Accessories	Connecting leads, experiment manual



**ACCURATE
MEASUREMENTS**



**RELIABLE
PERFORMANCE**



**PREMIUM
QUALITY**



**VARIABLE
IRRADIANCE**



**I-V CURVE
ANALYSIS**



**EASY TO
OPERATE**



**EDUCATIONAL
USE**



**LAB & RESEARCH
APPLICATIONS**



**COMPACT &
DURABLE DESIGN**

APPLICATIONS

- Physics laboratories
- Engineering colleges
- Renewable energy research
- Solar energy training
- Educational demonstrations

EXPERIMENTS

- To plot I-V characteristics of solar cell
- To determine short circuit current (I_{sc})
- To determine open circuit voltage (V_{oc})
- To determine maximum power point
- To study effect of light intensity on I-V curve

OPTIONAL ACCESSORIES

- Digital multimeter (optional)
- Data acquisition system (optional)
- Solar power meter (optional)

ESEL INTERNATIONAL

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