

Measurement of: Silicon Solar Cell efficiency

Equipment: I-V measurement system (M/s Newport Corporation, Model: J80036)

Property Measured: Current-voltage characteristic of solar cell

Photograph



Basic Principle: The efficiency of a solar cell is determined as the fraction of incident power which is converted to electricity and is defined as:

$$P_{max} = V_{oc} I_{sc} FF$$
$$\eta = \frac{V_{oc} I_{sc} FF}{P_{in}}$$

where V_{oc} is the open-circuit voltage; I_{sc} is the short-circuit current; and FF is the fill factor and η is the efficiency. These parameters are extracted from current-voltage characteristic of solar cell under illumination.

Capabilities: I-V characteristics of Industrial silicon solar cell 156X156 mm²

Sample Requirement: Industrial silicon solar cell 156X156 mm²