

SolarIV

SolarIV Solar Cell I-V Test System

Measure illuminated and dark I-V curves, conversion efficiency, fill factor and series and shunt resistance. SolarIV-150A and SolarIV-300A combine a solar simulator, digital source meter, reference cell and analysis software.

Best for: Electrical performance testing of laboratory solar cells under controlled illumination.

**40 × 40 / 60 × 60 mm**

Illuminated area

Light & dark I-V

Measurements

QE-B1 included

Reference cell

150A / 300A

Configurations

Representative solar simulator component. The complete SolarIV configuration also includes a source meter, reference cell and software; the sample stage is selected separately.

Overview

SolarIV sweeps cell voltage and records current to extract I_{sc} , J_{sc} , V_{oc} , maximum power, fill factor, efficiency and resistance parameters. Forward and reverse sweeps, adjustable scan speed and repeated cycles support comparisons between devices.

Choose the simulator area to cover the active cell. A sample stage is required separately; temperature control, vacuum holding and contact geometry are selected around the sample.

Features

- Light and dark measurements with dark-current subtraction
- Reference-cell calibration and automatic repeated sweeps
- TXT and Excel data export with report generation

Applications

- Solar-cell research and process comparison
- Photovoltaic device quality control
- Illumination-dependent electrical characterisation

Specifications and configuration

System configuration	
Models	SolarIV-150A; SolarIV-300A
Illuminated area	40 × 40 mm (150A); 60 × 60 mm (300A)
AM1.5G spectral match ratio	0.75–1.25
Spatial non-uniformity	≤ 2%
Temporal instability	≤ 1% (150A); ≤ 2% (300A)
Illumination direction	Downward
Source meter	IV-2450 standard; IV-2400 optional
Included reference cell	QE-B1 monocrystalline silicon cell
Sample stage	Not included; select separately

Available configurations

Model	Configuration
SolarIV-150A	40 × 40 mm illumination; ≤ 1% temporal instability.
SolarIV-300A	60 × 60 mm illumination; ≤ 2% temporal instability.

Configuration and quotation

Share the sample size, wavelength range and required measurements to select the source, optics and acquisition modules.

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