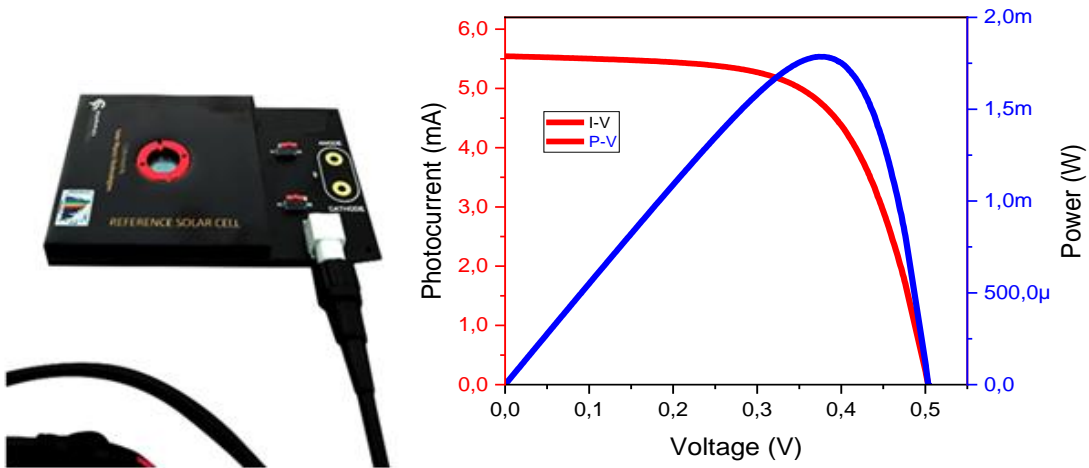


REFERENCE SOLAR CELL CERTIFICATE

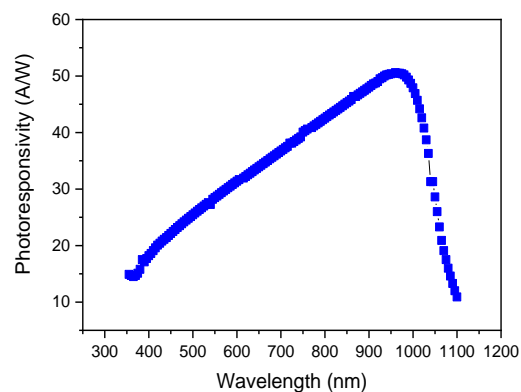
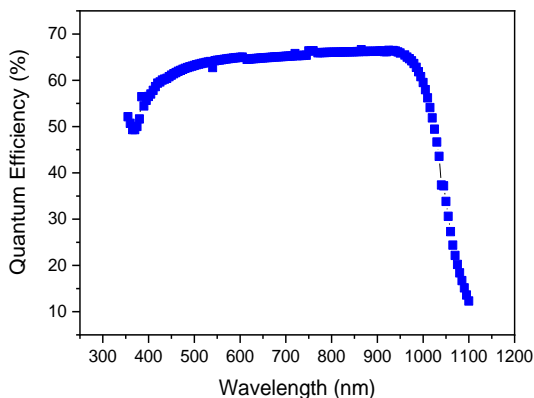
This photovoltaic reference cell is designed for calibrating the irradiance of solar simulator used in testing solar cell or when assessing the performance of photovoltaic devices to determine the I-V characterization. The calibrated reference cell consists of a 10mm x 10mm monocrystalline silicon photovoltaic cell encased in a 100mm x 100mm enclosure with a KG3 filter. All our measurements are done according to the following IEC standards: IEC 904-1, IEC 904-2, IEC 904-7, IEC 904-8, IEC 904-9, IEC 60891, ASTM 1021, ASTM E973M. The calibrated solar reference cell includes a certificate of calibration, compatible set of connecting cables, and is certified in the following parameters:

Calibration condition: 1000 Wm² (1 sun), AM1.5G, 25 °C



Enclosure dimensions: 100mm X 100mm X 10mm

Operating temperature 10 °C-40 °C



a) Quantum Efficiency spectra of Reference solar cell b) Photoresponsivity spectra of solar cell

Calibration Report

Photovoltaic parameters under 1 SUN

I_{sc} (mA)	V_{oc} (V)
5.56	0.51

The certification is accredited by NIST to the ISO-17025 standard and is traceable both to the National Renewable Energy Laboratory (NREL), and to the International System of Units (SI).

