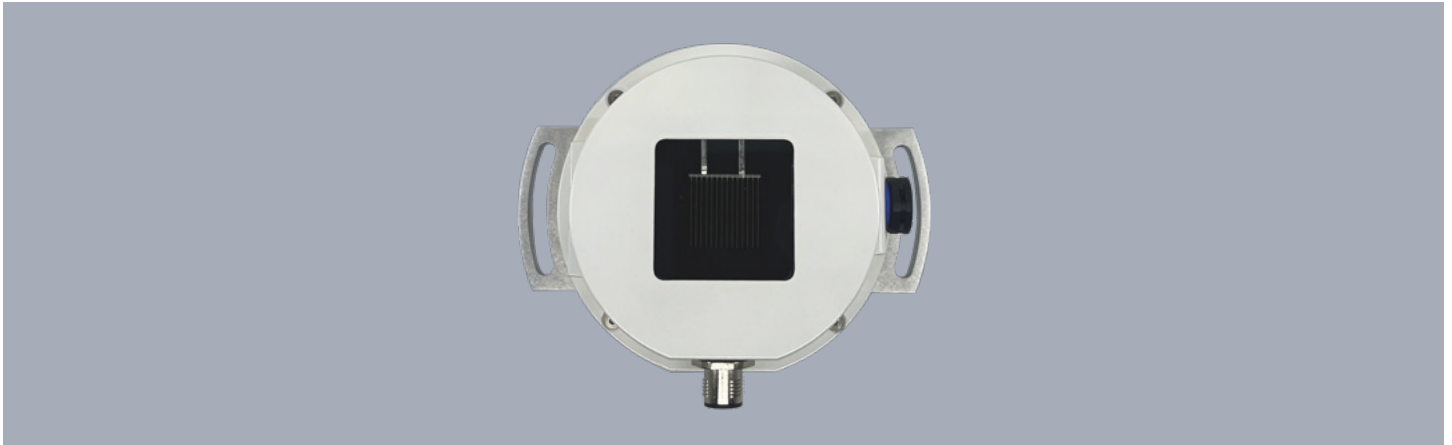


Reference Cells

Outdoor Mono crystalline Silicon analog reference cell



RR-1070A Reference Cell — Precision You Can Trust for Every PV Technology

Engineered for the next generation of solar performance analysis, the RR-1070A is more than just a reference cell—it's a gateway to highly accurate irradiance monitoring tailored to today's diverse PV landscape. What sets it apart? Every RR-1070A comes with a measured **External Quantum Efficiency (EQE)** curve, unlocking the ability to perform **precise spectral mismatch corrections** across all PV module technologies—not just silicon.

Compact yet powerful, the RR-1070 features a **20 × 20 mm stable encapsulated silicon solar cell**, calibrated against the **AM1.5G spectrum** to deliver reliable and repeatable irradiance data in real-world conditions. Whether you're monitoring silicon, thin-film, or emerging solar technologies, this reference cell empowers you to calculate **Performance Ratios (PR)** with unmatched confidence and traceability.

The RR-1070A easily integrates with the **EKO M-Box Modbus converter**, enabling **digital output of irradiance and cell temperature**, streamlining system integration. The modular setup allows for extension with **EKO pyranometers** and **PT-100 temperature sensors**, making it the ideal solution for comprehensive, high-accuracy solar monitoring.

With the RR-1070A, irradiance measurement meets precision, spectral insight, and plug-and-play versatility—giving you the data quality needed to drive smarter decisions in PV performance and yield analysis.

Ideal for:

- PV system performance monitoring
- PV module testing and certification
- Solar simulator calibration
- Outdoor irradiance monitoring for yield analysis

Key Features

- High-precision crystalline silicon solar cell
- Calibrated to IEC 60904-2 / IEC 60904-4
- Integrated 10kΩ NTC
- Rugged and weatherproof design
- Plane of array (POA) mounting
- Low maintenance / long-term stability
- Ready for SCADA/DAQ integration
- Shunted with a 0.2 ppm/°C resistor

Synergy with other EKO Instruments Sensors



Pyranometers



Pyrhemometers



DAQ / SCADA



Albedometer



Sun Trackers



M-Box

General Specifications

ISO 9060:2018	Class C
Response time 95%	< 0.1 Sec
Non-stability (change/year)	± 1.5%
Non-linearity (100 to 1000W/m ²)	± 1%
Spectral error	± 5%
Temperature response (-20°C to 50°C)	± 1%

Technical Features

Wavelength range (nm)	400 - 1100 (Mono Crystalline Silicon)
Irradiance range (W/m ²)	0 to 2000
Signal output	Analog (~ 65mV @ 1000 W/m ²)
Operating temperature range	-40 to 80 °C
Ingress protection	IP 67
Calibration traceability / uncertainty	AM1.5 / 25 °C / 1000 W/m ²
Standard cable length	Optional lengths 5, 10, 20, 30, 50m
Area silicon cell	20 x 20 mm

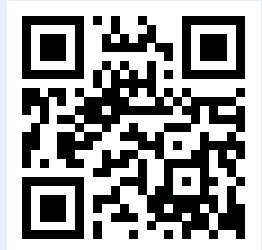
For Additional Support

If you need any additional information or support, write us an email to one of our offices.

More information can be found on the product page.

QR

Use the QR code to visit our website, contact our team, or to find out more about, other related products, and the full range of industry-leading EKO sensors and instruments.



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