Generating, Controlling and Measuring Light for Over 35 Years

PV Test Division

scientific research, photobiology, biomedical, solar cell testing, cosmetic testing, paints and coatings analysis

TriSOL™

Solar Power Meter

The New Standard for Continuous Wave Solar Simulators

Unique Features

- Integrates with calibrated reference cell
- Display temperature readings in °F or °C
- Measure and display continuous or peak readings
- Connects to USB 2.0 port for data collection
- Displays reference cell characteristics, including cell type and size, window type, and temperature measurement device type
- Powered by standard wall current or convenient, rechargeable Lithium Ion battery pack
- Stores and displays average of recent peak measurements (user setable)
- Comes with 2 separate Thermal Measurement Connector types (k type thermocouples and rtd) - Designed for use with either type

OAI's TriSOL Solar Power Meter is an exceptional instrument for measuring the irradiance in "suns" for Continuous Wave Solar Simulators. This instrument has unique features not found in other Solar Meters. This versatile power meter can display reference cell characteristics, including cell type, window type, cell size, and temperature measurement device type - continuous reading or peak reading. The Solar Power Meter connects via USB 2.0 port on a PC for data collection, and includes desktop software.

Based on over 35 years of proven light source technology, OAI's TriSOL family of products deliver repeatable, reliable, cost effective solutions for a wide range of solar simulation and testing. Other TriSOL products include Solar Simulators, I-V Testers, Calibrated Reference Cells and test fixtures. All products are supported by OAI's global service and application engineering network.

TriSOL™

OAI Solar Power Meter

The OAI Solar Power Meter is a versatile tool for solar simulator calibration and solar cell I-V characterization. The system includes the OAI Solar Power Meter plus a Calibrated Solar Reference Cell. The solar reference cell equipped with a thermocouple is assembled in accordance with IEC 60904-2. The certification is accredited by NIST to the ISO-17025 Standard and is traceable to the National Renewable Energy Laboratory (NREL).

The OAI Solar Energy Meter measures solar simulator irradiance in "sun" units, for example, with one sun equaling 1000 W/m2 at 25 °C at Airmass 1.5 Global Conditions. Other calibration conditions are available as well, and the meter can be used with additional reference cells without being recalibrated. The OAI Solar Power Meter features two separate Thermal Measurement Connector types (k-type thermocouples and rtd) - Designed for use with either type.

SPECIFICATIONS

Meter Dimensions	8.07" (W) x 3.12" (H) x 5.85-6.64" (D)
Weight	2.23 lb (with battery)
Operating Temperature	10 ºC - 40 ºC
Operating Humidity	0 – 90% RH Non-Condensing

Irradiance Display

Range	0 – 6.000 Sun (1.5 Global Air)
Accuracy	±0.05% @ 1.0000 Sun ±0.0010 @ 24 ºC
	±0.05% @ 0.1000 Sun - 1.4815 Sun @ 24 ºC
	±0.09% @ 1.4815 Sun - 2.9630 Sun @ 24 ºC
	±0.50% @ 3.0000 Sun - 6.0000 Sun @ 24 ºC
Resolution	0.0001 Sun @ 0 – 1.4815 Sun
	0.001 Sun @ 1.430 - 6.000 Sun
Settling Time	<1 sec. for <0.25% (= 6τ)
Sampling Rate	5 Readings / second
Auto Ranging	2 Ranges

Temperature Display

Temperature Range	0 – 200 ºC
Accuracy for TC	±1.5 ºC Typical ±1.8 ºC Max @ 22 – 28 ºC
	±0.5 ºC Typical ±2.5 ºC Max @ 10 – 40 ºC
Resolution	0.01 ºC
Settling Time	<1 sec. for <0.20% (= 6_)
Sampling Rate	5 Readings / second

AC/DC Adapter

AC Power	100-240V AC, 1.5A, 50-60 Hz
DC Power Input	24V, 2.7A
Compliance	UL, CE IV, RosH, Indoor Dry Location Use Only

Preliminary specifications are subject to change without notice

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