

Solar Light's versatile NIST-Traceable **Model PMA2100 Radiometer** is designed for scientific professionals, offering unparalleled accuracy and flexible data management. The unit accepts over 85 different PMA21xx-Series sensors measuring UV, Visible and IR wavelengths. Solar Light's patented Intelligent Detector Technology allows users to interchange sensors without losing the functionality of a single purpose meter, while the Automatic Sensor Recognition feature eliminates the need to match meters and sensors. Any PMA Sensor can interface with any PMA Meter thanks to a memory chip, which makes it unnecessary to permanently load sensor information into the meter. This is especially useful in labs that have more than one meter and several sensors! The PMA2100 can store 1024 records with full traceability, each including time, date, and sensor calibration status. Data logging can be triggered automatically or manually, in 1 minute to 2 hour intervals, and is stored in a non-volatile memory. The data downloads through the meter's output port to any computer via the supplied USB cable.



### Applications

- Laboratory and Industrial Radiometry
- UV Curing, Printing, and Photolithography
- Skin and SPF Testing
- Clinical Studies
- Phototherapy
- Environmental Monitoring
- Material Testing
- UV-A Transmission Measurements

### Features and Benefits

- High Sensitivity
- Dynamic Range  $2 \times 10^5$
- Excellent Long-Term Stability
- Manual or Automatic Data Logging
- Automatic Sensor Recognition
- NIST Traceable Calibration
- Radiometric Units
- Made in USA



### SPECIFICATIONS

<b>Detector Inputs</b>	2 Sockets with Up to 2 Analog Signals Each
<b>Input Ranges</b>	±0.4V, ±4V, Auto Ranging
<b>Resolution</b>	15µV on 0.4V Range
<b>Dynamic Range</b>	>2x10 <sup>5</sup>
<b>Accuracy</b>	0.5% FS All Ranges
<b>Non-Linearity</b>	Max 0.02% FS within Each Range
<b>Operating Environment</b>	32 to 120°F (0 to +50°C)
<b>Temperature Coefficient</b>	Max 50ppm/°C
<b>Power Source</b>	4 x AA NiCd or Alkaline Batteries, 9-12V AC or DC Charger
<b>Battery Life</b>	Up to 40 Hours Between Charges
<b>Interfaces</b>	RS-232 Serial Interface and Opto-Isolated Digital I/O
<b>Program Control</b>	12-Button Keypad
<b>Size WxDxH</b>	4" x 1.75" x 7.5" (10 x 4.3 x 19.2 cm)
<b>LCD Size</b>	2.25" x 1.25" (5.7 x 3 cm)
<b>Weight</b>	18 oz. (510 grams)

### ORDERING INFORMATION

<b>PMA2100</b>	Dual input, data logging radiometer package, features the PMA Datalogging Organizer software (sample rate in minutes), a battery charger, a USB cable, and a hard cover carrying case.
<b>PMA2100B</b>	Basic model with no datalogging, case or accessories.
<b>PMA2100C</b>	Dual input, data logging radiometer package, features the PMA Datalogging Organizer software (sample rate in seconds), a battery charger, a USB cable, and a hard cover carrying case.

### REFERENCES

<sup>1</sup> The biological effects of UV-A radiation - Edited by F. Urbach and R.W. Gange, Praeger Publishers, New York, 1986

<sup>2</sup> Nichodemus F., "Self study manual on optical radiation measurements", NBS Technical Note 910-1 (1976).

Part Number: 210050

Revision Level: D

Specifications subject to change without notice.

US Patent 5,790,432



PMA2100 Rugged Carrying Case with room for 2 sensors

Since 1967, Solar Light Company, LLC has been recognized worldwide as America's premier manufacturer of Precision Solar Simulators and Light Sources, Light Measurement Instrumentation, UV Transmittance Analyzers, Meteorological Instrumentation, and Digital and Analog Sensors. Our advanced line of UV, visible, and IR radiometers and light meters measure laboratory, industrial, environmental, and health related light levels with NIST traceable accuracy. Column ozone, aerosol, and water vapor thickness measurements, in addition to long-term global ultraviolet radiation studies all over the world are performed using our atmospheric line of instrumentation. Solar Light also provides NIST traceable spectroradiometric analyses, calibrations for light meters and light sources, accelerated ultraviolet radiation degradation testing of materials, and OEM instrumentation and monitors. Please visit our website for more details, specifications, and pictures!



**State Of The Art Solar Simulators** available in 150-1000+ watt UV or AM variations for a variety of applications including PV Cell Testing, Materials Testing, Pre-Irradiation for In Vitro Broad Spectrum Sunscreen Testing, SPF Testing, and much more.



**Multi-Functional Professional Grade Radiometers** available with and without data logging, and compatible with over 130 Solar Light PMA-Series Sensors to measure UV, Visible and IR wavelengths. Specialty Meters also available to measure UV Radiation, SUV/UVA, Scotopic/Photopic Spectra, and much more.



**Advanced NIST-Traceable Sensors** for accurate measurement of UVA, UVB, UVA+B, UVC, Visible, IR, Photostability, Temperature, and Custom Wavelength – well over 130 models in both digital and analog configurations, all compatible with our Radiometers.



**Ultraviolet Transmittance Analyzers** available as complete integrated turnkey systems to meet the latest ISO24443 requirements.



**Handheld Ozonometers and Sunphotometers** for fast and dependable Column Ozone, Aerosol, and Water Vapor Thickness measurements, in addition to long-term global ultraviolet radiation studies.