

# Solarmeter® Model 4.0

UVA Meter • 0-199.9 mW/cm<sup>2</sup>

Handheld Digital UVA Radiometer  
with Integral Sensor



## Applications

- Monitoring UV Lamp Intensity and Aging
- Measuring Outdoor UVA
- Testing Acrylic Shield Transmission
- Testing Eyewear UVA Blocking Capabilities
- Testing Window Film/Tint Transmission
- Choose Standard Model 4.0 For Outdoor / High Intensity Applications
- Choose Sensitive Model 4.2 For Indoor / Low Intensity Applications

## Features and Benefits

- Compact, Handheld, and Durable
- Simple Single-Button Operation
- NIST Traceable Accuracy
- LCD Display
- Made In USA

## Sensor

The sensor consists of a GaAsP photodiode and a UV filter. It is completely insensitive to visible light longer than 400nm and infrared radiation, because its spectral response only covers the UVA region from 320-400nm.

## Meter Operation

To operate your Solarmeter, aim the sensor window located on the top panel of the meter directly at a UV source. Press and hold the push-button switch on the face of the meter. Reading represents IU/min D3 on 10% body surface.

Battery operation voltage is viable from 9V down to 6.5V. Below 6.5V, the numbers on the LCD display will begin to dim, indicating the need for battery replacement. Under typical service load, a standard 9V battery will last approximately 2 years.

## Proper Usage of Solarmeter® Ultraviolet Radiometer

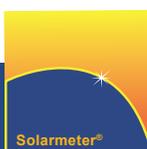
- Wear eye protection when checking UV lamps. Glasses that provide wrap around protection are ideal.
- Allow lamps to warm up prior to taking readings (at least 5 minutes).

## Lamp Aging

- When checking lamp aging, make sure to use the same location and distance to ensure accurate readings.
- Lamps should be replaced when output drops to about 70% of their original (new) readings.

## Curing Lamps

- For curing lamps, hold the meter at the distance you intend your work piece to be cured.



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## Tanning Lamps

- To take the overall reading at the center of the tanning bed, place meter pointing up with canopy closed.
- To take individual lamp readings, hold the meter against the acrylic with canopy open.
- This meter is “seeing” the UVA “browning” rays. For erythematous readings use Model 7.0 MED/hr meter.

## Acrylic Testing

- For acrylic testing, take readings with and without acrylic at a fixed distance.
- When comparing different types of lamps consider readings to be relative rather than absolute.
- Lamps that peak near 365nm (newer designs) will read higher than lamps that peak near 350nm.

## General

- Do not subject the meter to extremes in temperature, humidity, shock or dust.
- Use a dry, soft cloth to clean the instrument. Keep sensor free of oil, dirt, etc.

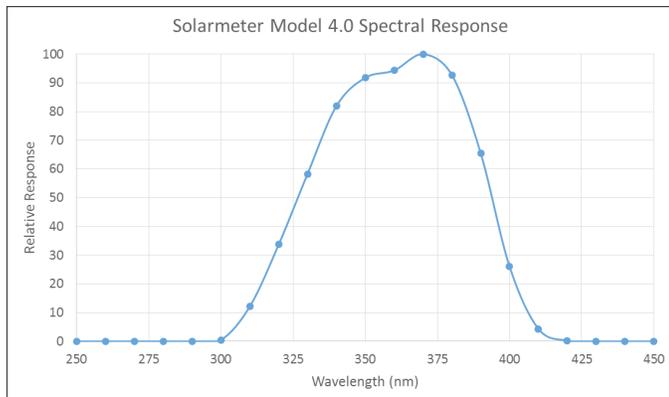


Fig. 1. Model 4.0 Spectral Response

## SPECIFICATIONS

|                                |  |
|--------------------------------|--|
| <b>Model</b>                   | 4.0  |
| <b>Irradiation Range</b>       | 0-199.9 mW/cm <sup>2</sup> UVA                     |
| <b>Response</b>                | 320-400 nm UVA                                     |
| <b>Resolution</b>              | 0.1 mW/cm <sup>2</sup>                             |
| <b>Conversion Rate</b>         | 3.0 Readings / Sec                                 |
| <b>Display</b>                 | 3.5 Digit LCD                                      |
| <b>Digit Size</b>              | 0.4" / 10.2 mm                                     |
| <b>Operational Temperature</b> | 32°F to 100°F / 0°C to 37.8°C                      |
| <b>Operational Humidity</b>    | 5% to 80% RH                                       |
| <b>Accuracy</b>                | ±10% Ref. NIST                                     |
| <b>Meter Dimensions</b>        | 4.2L x 2.4W x 0.9D in /<br>106.7L x 61W x 22.9D mm |
| <b>Weight</b>                  | 4.5 oz / 128g Including Battery                    |
| <b>Power Source</b>            | 9-Volt DC Battery                                  |
| <b>Lens</b>                    | UV Glass   |
| <b>Diffuser</b>                | Teflon   |
| <b>Agency Approval</b>         | CE Mark  |

Rev: sm/sensors/model4.0\_5/2018  
Specifications subject to change without notice.

*Solar Light Company, Inc.* is recognized worldwide for over 50 years as America's premier manufacturer of precision ultraviolet light sources, solar simulators, and radiometers. Our standard 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, OEM instrumentation and monitors, and accelerated ultraviolet radiation degradation testing of materials.

