

Solarmeter Model 6.4

Vitamin D3 Meter • 0-1999 IU/min



Handheld Digital UV Radiometer with Integral Sensor



Applications

- Monitoring of Vitamin D Production In IU/min
- Monitoring UV Lamp Intensity and Aging
- Comparison Of Sources In Terms Of Vitamin D Production
- Measuring Solar Intensity In Terms Of Vitamin D Production

Features and Benefits

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

Sensor

Silicon Carbide (SiC) Photodiode packaged in hermetically sealed UV Glass window cap. Interference filter blocks most non-erythema (non-D3) irradiance from response as shown on Spectral Sensitivity Graph.

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® D3 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).
- Keep track of exactly how long you are exposed to a UV source to properly calculate total vitamin D produced.
- 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.

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Proper Usage (continued)

Please go to www.solarmeter.com and choose the Solarmeter Model 6.4 page to receive a downloadable interactive Vitamin D calculation utility to aid in your use of the meter.

Some helpful formulas embedded in the utility found at www.solarmeter.com:

- 1000 IU = 1 MED (Minimal Erythral Dose) The minimum dose of radiation that produces a sunburn.
- 1 IU/min = 1/1000 MED/min (or 0.06 MED/hr, which = 1/16.67 MED/hr)
- 1 MED/hr = 2.33 UVI and 1 MED/hr = 16.67 IU/min.
- The conversion constant for IU/min to UVI is $16.67 / 2.33 = 7.1$ UVI.

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.

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Solarmeter Specifications	
Radiometer	
Model	6.4
Irradiation Range	0-1999 IU/min
Response	280-400 nm Diffey Erythral Action Spectrum
Resolution	1 IU/Min
Conversion Rate	3.0 Readings / Sec
Display	3.5 Digit LCD
Digit Size	0.4" / 10.2 mm
Operational Temperature	+32°-100°F / 0°-37.8°C
Operational Humidity	5% to 80% RH
Accuracy	±10% Ref. Nist
Dimensions	4.2L x 2.4W x 0.9D in / 106.7L x 61W x 22.9D mm
Weight	4.5 oz / 128 g Including Battery
Power Source	9-Volt DC Battery
Lens	UV Glass
Diffuser	Teflon
Agency Approval	CE Mark

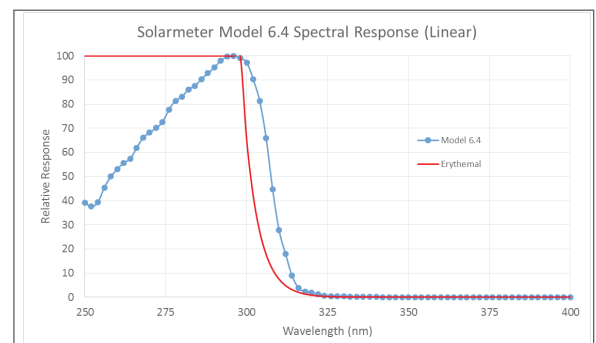


Fig. 1. Model 6.4 Spectral Response (Linear)

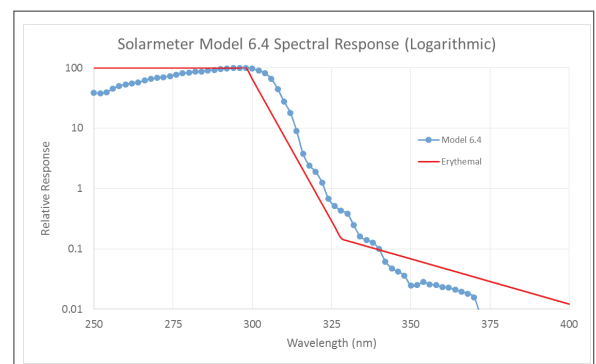


Fig. 2. Model 6.4 Spectral Response (Logarithmic)