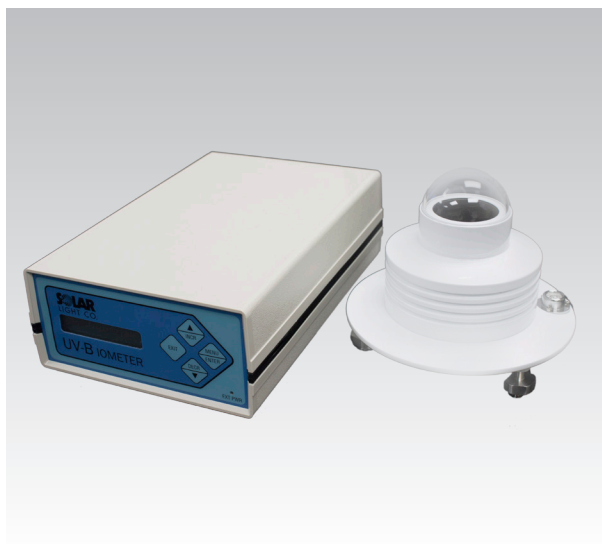
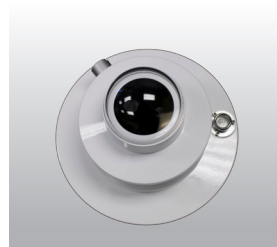
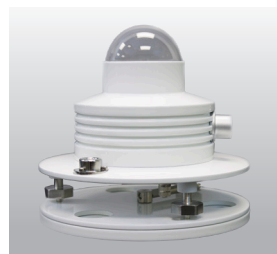


Solar Light's Model 501 Series Radiometers are rugged meteorological-grade instruments which measure solar radiation outdoors and underwater (up to 16.4 feet / 5 meters maximum depth.) World Class manufacturing practices and NIST traceable calibrations ensure a high degree of reproducibility and comparability from unit to unit. Large networks of these precision devices are relied upon by many of the world's most prestigious metrological observatories, weather stations, and research agencies worldwide, such as the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and the Natural Resource Ecology Laboratory (NREL.) Digital versions are available with Sensor Recorders, and analog versions are available with output voltage which is proportional to the measured UV solar radiation. In addition, all 501s feature controlled internal temperature to ensure the highest levels of accuracy.



Applications

- This permanent outdoor UV solar radiation measurement system is used in weather stations and metrological observatories around the world.
- Measurement of solar ultraviolet radiation and from artificial sources with wavelengths above 280nm to 400nm.
- Plant, marine, climatological ozone and other biological impact studies that require continuous field measurements over long periods of time.
- Measurements for media and research organizations that provide public information about the effects of UV radiation.



Features and Benefits

- High Accuracy
- Easy To Use
- Portable
- Instantaneous Results
- Non-Volatile Memory
- Optional Data Logger stores Up to Six Months 1 Hour Data Samples and Temp from Two Sensors
- Sampling Period Selectable from 1 Min to 1 Hour
- Made in USA

SPECIFICATIONS	
Spectral Range Based on Erythema Action Spectrum	280-320nm - 99.503%
	320-400nm - 0.497%
Measurement Range	0-10 MED/Hr
Angular Response	Within 5% of Ideal Cosine
Response Time	1 Second (0.1 second on demand)
Temp Correction	1% per C
Expected Daily Uncertainty	+/-5%
Operating Conditions	-40 to 120°F (-40 to 50°C)
Dimensions (HxDiam)	5.5" x 5.9" (14 x 15 cm)
Weight	2 lbs (0.9Kg)(without cable)
Cable	50 ft (15.24 m) Cable with Hermetic Connector Standard. <i>Up to 200 ft (61 m) Length Optional</i>
Mounting	3 Leveling Feet, Circular Level
Sensor Signal Output	0-2.5V, 0.25[V/(MED/hr)], 0.5mA/hr
Sensor Temp Output	0-1V, 1V=25 C, Sensitivity 20mV/ C, 0.5mA max
Power Requirements	5.5-25V/5mA Max for Signal Circuit. 11-15V/1A Max for Temp Stability
ORDERING INFORMATION	
Model 501-CS	UV Digital Detector with Recorder and 50' cable
Model 501-DD	UV Digital Detector only and 50' Cable
Model 501-DA	UV Analog Detector only and 50' Cable
RAF >1 (Radiation Amplification Factor Calculated for 30 Solar Zenith Angle and 0m27cm Ozone Column).	

Part Number: 210057

Revision Level: B

Specifications subject to change without notice.

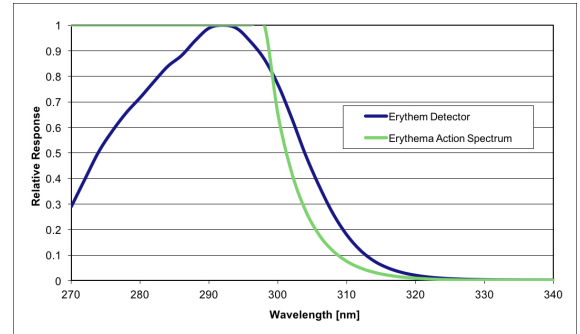


Fig. 1. Linear Spectral Response

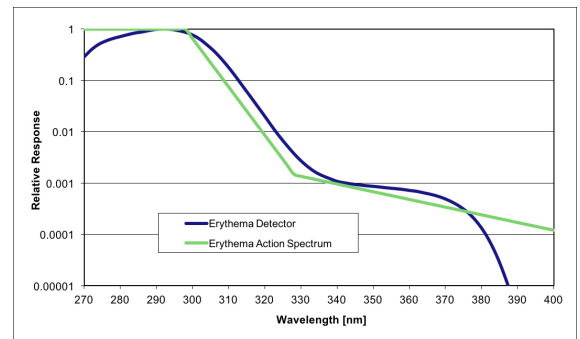


Fig. 2. Log Spectral Response

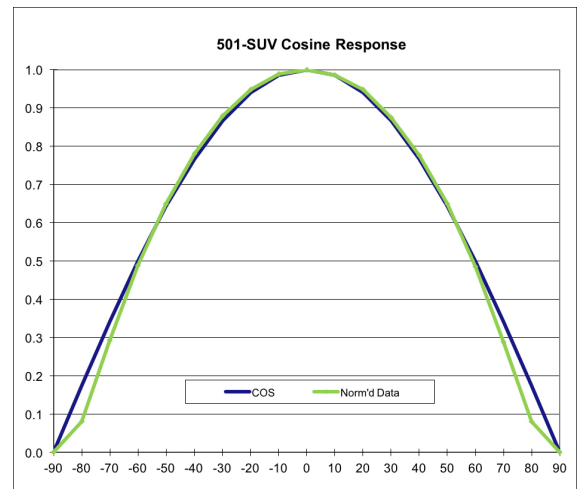
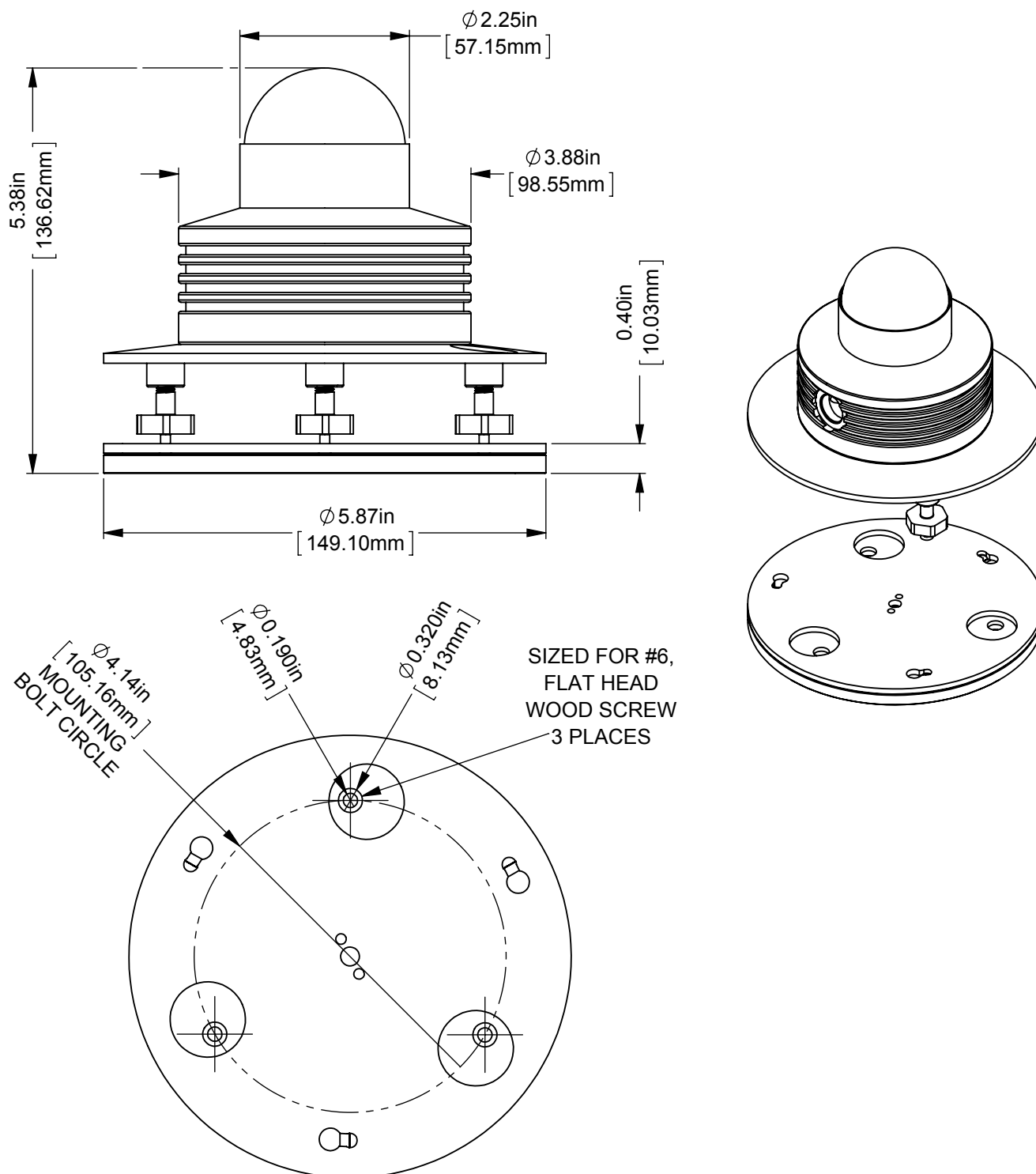


Fig. 3. Cosine Response

Model 501 UV Biometer-Radiometer Outline Drawing



Since 1967, Solar Light Company, Inc. 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.