Simulators • PV Cell Testing Light Source

LS1000-6R-002

Large Area UV Simulator for PV Cell Testing

Applications

- PV Cell Testing

Features and Benefits

- High Uniformity and Excellent Long-Term Stability
- Complies with ASTM, ISO Guidelines
- Collimated Output Giving 14" Depth of Field with >95% Uniformity
- Automatic Dose Control Available
- Easy to Use Intensity and Uniformity Measurement System
- Full System Supplied Ready to Use

The single output of the LS1000 Solar Simulator produces an Air Mass 1.5 spectrum accurately replicating full spectrum sunlight, and meets the latest standards for light sources including ASTM E927-05, E948-09, G173-03e1 and IEC 60904-9. The simulator comes complete with an XPS power supply. The LS1000-002 has a vertical beam that directs the light beam to point downward. The spot size is 4 or 6 inches square with a 1 sun output intensity. Other configurations are available.

By using the control knob on the power supply, the intensity can be varied between 80 and 100% of maximum. The intensity can also be varied from 10% and 100% with the optional "Attenuation Kit".

The 4 or 6 inch square beam fully irradiates a square solar cell, delivering the required effective radiation. The dose can be measured using the PMA2100 Data Logging Radiometer along with the PMA2144 Class II Pyranometer which measures the full spectrum radiation.

The LS 1000 lamp is ignited at the touch of a switch on the power supply. After a 10 minute "warm-up" period, the source is ready to use.

Additional Featues

- Reproduce Class A AM1.5 Spectrum Using Xenon Short Arc Lamps
- Standard and Customizable Simulators Validated to Comply with the ASTM
- Laboratory Light Sources Standard and Geet Test Protocols
- 1000 Watt Xenon Arc Lamp
- Complete High Performance Optics for Collimation and Uniformity
- Optional Filters Allow for User Changeable Spectra

SOLAR® LIGHT

- UV, Air Mass 0 and 1.5 Spectra Available
- Square Beam Size of 2”, 4”, and 6”
- Round Beam Size of 4”, 6”, and 8”
- Beam Uniformity Across Illuminated Area Better Than 5%
- High Efficiency Switching Power Supply with Adjustable Current for Variable Intensity
- Internal Electric Shutter
- Forced Air Cooling System
- Available with Precision Dose Control System

The PMA2100 is a portable Dose Controller/Radiometer with patented* PMA intelligent sensors. Information stored in the sensor is instantly recognized by the PMA2100, thus negating the need to input offsets, calibration data and units, and saving valuable time. *U.S. Pat. 5,946,641 and U.S. Pat. 5,790,432

Specifications	
Simulator output	1000W Xenon Short Arc
Simulator Spectrum	290-2500nm
Exposure Area	4”x4” or 6”x6”
Power Requirements	220VAC, 50/60Hz
Operating Conditions	0-50°C (32 to 120 °F)
Dimensions (4S/6R)	23.75x10.5x20.25” / (60.3x26.7x51.5cm)
Weight	35lbs (16Kg)
Dimensions (6S/8R)	28.0 x10.5x20.25” / (71.1x26.7x51.5cm)
Weight	45lbs (20Kg)
Reference Call	Calibrated
Radiometer Specifications	
Radiometer Range	250—2500nm
Power Requirements	4 x AA Batteries
Operating Conditions	0-50°C (32 to 120 °F)
Dimensions	17 oz (480 grams) 4.0x7.6x1.75” (10x19.5x4.5 cm)
Sensor Specifications	
Sensor Range	250—2500nm
Display Resolution	0.1 mW/cm^2, 1.0 W/m^2
Operating Conditions	0-50°C (32 to 120 °F)
Dimensions	11 oz (310 grams)
Diameter	2.375” (60.3mm)
Height	3.31” (84.0mm)
Ordering Information	
LS1000-6R-UV	Solar Simulator
PMA2100	Datalogging Radiometer
PMA2144	Pranometer

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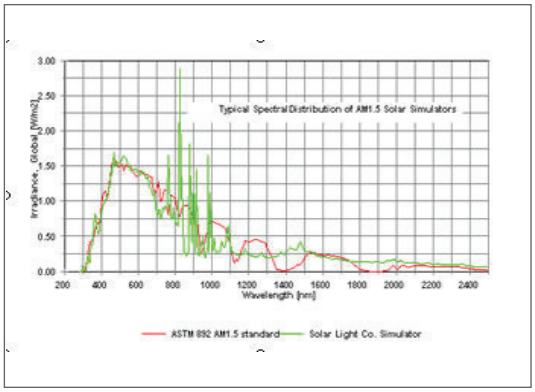

Fig. 1. LS1000-6R-002 Spectral Response