

Solar Light Company, LLC has been the foremost name in light sciences since we invented the world's first Solar Simulator in 1967. Our state of the art single output **Solar Simulators produce solar UV radiation** in the 290-400nm range, and can be quickly and easily configured by the user to provide UVA only, UVB only, UVA+B, or full spectrum sunlight optionally. These precision research-grade instruments are specifically designed to comply with laboratory standards such as ASTM, IEC, and ISO. Solar Light's simulators can reliably produce UV levels several times stronger than tropical sun without any of the associated heat load, which is ideal for measuring the damaging effects of UV during materials testing.



LS1000-Series

- > 95% Uniformity, with 98% Uniformity available in beam's central usable area
- Square Beam Models available in 4" (10 cm) and 6" (15 cm) single port outputs
- Collimated Output

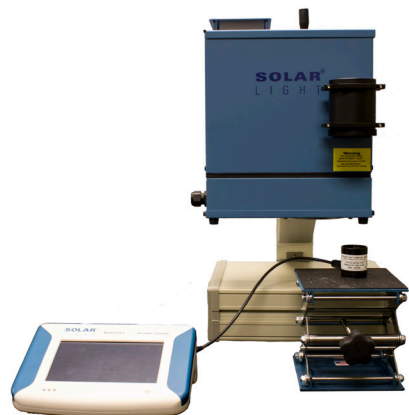
16S-Series

- > 90% Uniformity in beam's usable area
- 300W Round Beam Model available in 1.2" (3 cm) single port output
- 150W Round Beam Model available in 0.8" (2 cm) single port output
- Focused Output

Advantages

- Standard and Customizable Simulators validated to comply to comply with ASTM, IEC, and ISO requirements
- CE Compliant
- Prepackaged Kits include Dose Controller / Radiometer, NIST-traceable Sensors, and all related accessories required for immediate testing
- Temperature rise of the sample is <0.2 °C.
- Custom-Designed Spectra available
- High performance fused silica optical components included
- Excellent long-term stability
- Easy to use Intensity and Uniformity Measurement System
- Automatic shutter with remote control connection Included
- High efficiency Switching Power Supply with adjustable output for variable lamp power included
- Optional Air Mass 0 and 1.5 Spectra from 250-2500nm available
- Optional Visible Light Only output available
- Optional Light Attenuation Screens available
- Optional Validation available





Solar Light's Turnkey Testing Kits include Simulators, Dose Controllers, Radiometers, Sensors and Accessories so you can start testing instantly!

Turnkey Kits For Materials Testing

Our prepackaged kits combine these state of the art Solar Simulators with our innovative Automatic Dose Controllers, advanced Data Logging Radiometers, NIST-traceable Sensors, and other hardware to allow for instant testing right out of the crate.

Typical kits include:



Sophisticated Automatic Dose Controllers accurately control dosage to allow for extremely precise testing. The 7-inch (17.8 cm) touch sensitive screen allows the user to follow intuitive menus, and makes it quick and easy to set control parameters.



Advanced NIST-Traceable Sensors for exact measurement of UVA+B as required for standardized materials testing. Over 130 different sensor models available for custom configurations.



Laboratory Scissor Jacks with 5.5"x5.5" (14cm x 14cm) surface allow for height adjustment from 2.75" to 10.25" (7cm to 26cm) for accurate specimen setup.



Compliant



Compliant



ISO 24443 Compliant



Compliant



Compliant

SPECIFICATION	16S-150-003	16S-300-003	LS1000-4S-003	LS1000-6S-003
Output Beam Size	0.8" (2 cm) Round	1.2" (3 cm) Round	4" (10 cm) Square (round beam optional)	6" (15 cm) Square (round beam optional)
Beam Orientation	Vertical Downward, Vertical Upward, or Horizontal (please specify at order)	Vertical Downward, Vertical Upward, or Horizontal (please specify at order)	Vertical Downward, Vertical Upward, or Horizontal (please specify at order)	Vertical Downward, Vertical Upward, or Horizontal (please specify at order)
Lamp Type	Xenon Short Arc	Xenon Short Arc	Xenon Short Arc	Xenon Short Arc
Lamp Wattage (Nominal)	150W	300W	1000W	1000W
Beam Uniformity	±10%	±10%	±5%	±5%
Collimation	N/A	N/A	±1.5-3 Degree Half Angle (For All Models)	±1.5-3 Degree Half Angle (For All Models)
Spectral Match Classification	A (IEC 60904-9 2007)	A (IEC 60904-9 2007)	A (IEC 60904-9 2007)	A (IEC 60904-9 2007)
	A (JIS C 8912)	A (JIS C 8912)	A (JIS C 8912)	A (JIS C 8912)
	A (ASTM E927 - 05)	A (ASTM E927 - 05)	A (ASTM E927 - 05)	A (ASTM E927 - 05)
Temporal Instability Classification	A (IEC 60904-9 2007)	A (IEC 60904-9 2007)	A (IEC 60904-9 2007)	A (IEC 60904-9 2007)
	A (JIS C 8912)	A (JIS C 8912)	A (JIS C 8912)	A (JIS C 8912)
	A (ASTM E927 - 05)	A (ASTM E927 - 05)	A (ASTM E927 - 05)	A (ASTM E927 - 05)
Uniformity Classification	B (IEC 60904-9 2007)	B (IEC 60904-9 2007)	B (IEC 60904-9 2007)	B (IEC 60904-9 2007)
	B (JIS C 8912)	B (JIS C 8912)	B (JIS C 8912)	B (JIS C 8912)
	B (ASTM E927 - 05)	B (ASTM E927 - 05)	B (ASTM E927 - 05)	B (ASTM E927 - 05)
1 Year Temperate Region Simulation	7 Days	10 Days	41.6 Days	41.6 Days
Light Ripple	< ±2% rms	< ±2% rms	< ±2% rms	< ±2% rms
Working Distance	~6.3" (16 cm)	~8.7" (22 cm)	5.0" ±2.0" (12.7 cm +/- 5.2 cm)	5.0" ±2.0" (12.7 cm +/- 5.2 cm)
Long Term Drift (<4 Hours)	<0.1%	<0.1%	<0.1%	<0.1%
Power Limit	Factory Set Limit is 150 watts	Factory Set Limit is 320 watts	Factory Set Limit is 1,500 watts max	Factory Set Limit is 1,500 watts max
Operating Temperature	32°F to 95°F / 0°C to +35°C	32°F to 95°F / 0°C to +35°C	32°F to 95°F / 0°C to +35°C	32°F to 95°F / 0°C to +35°C
Storage Temperature	-4°F to 185°F / -20°C to +85°C	-4°F to 185°F / -20°C to +85°C	-4°F to 185°F / -20°C to +85°C	-4°F to 185°F / -20°C to +85°C
Humidity	0 to 95% non-condensing	0 to 95% non-condensing	0 to 95% non-condensing	0 to 95% non-condensing
Cooling	Forced air	Forced air	Forced air	Forced air
Medical Safety Certifications	EN61010-1 Laboratory, EN60335 Appliances, IEC60601-1 Medical			
EMI/EMC	EN55011 Emissions, IEC60601-1-2:2001, 2nd Rev 2 Medical, IEC61000-3-2 Harmonic, IEC61000-3-3 Flicker, IEC61000-4-2 ESD, IEC61000-4-3 Radiated, IEC61000-4-4 EFT, IEC61000-4-5 Surge, IEC61000-4-6 Conducted, IEC61000-4-11 Voltage Dip, IEC61000-4-8 Magnetic Field			
Weight	7.7 lbs. (3.2 kg.)	10.5 lbs. (4.8 kg.)	40 lbs. (18.2 kg.)	45 lbs. (20.5 kg.)

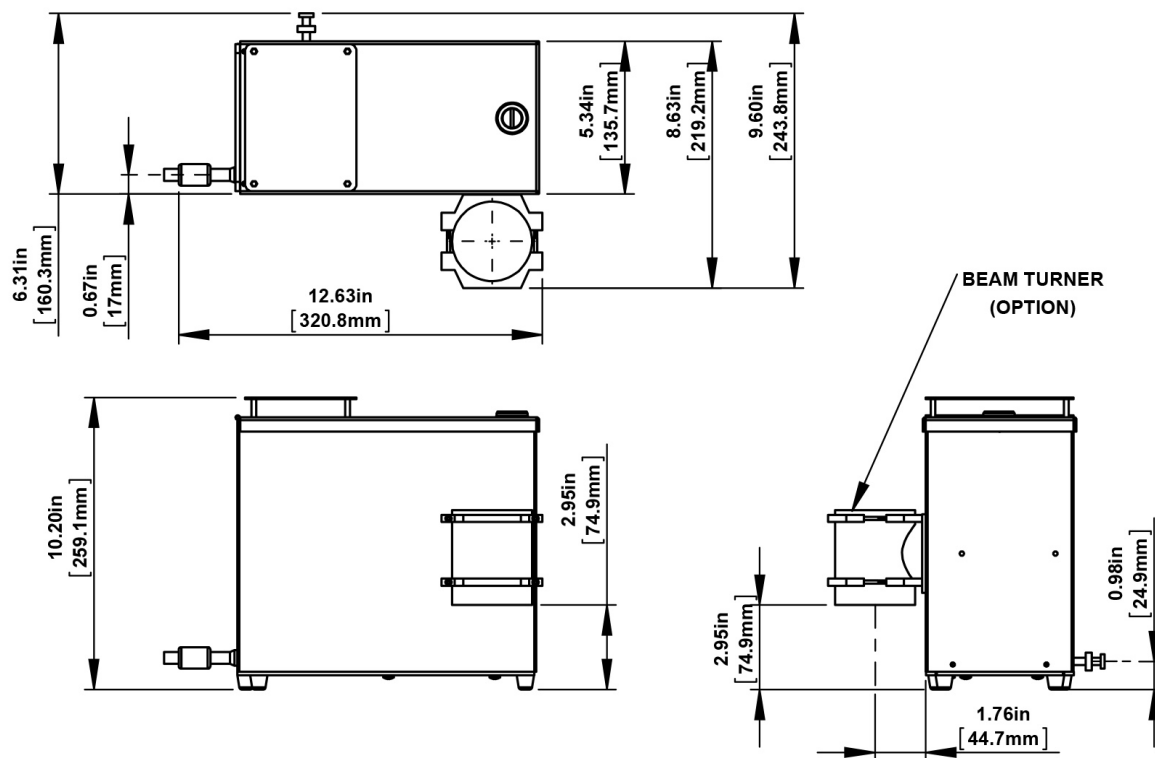
Specifications subject to change without notice.

Custom beam sizes and configurations available - please consult factory for details.

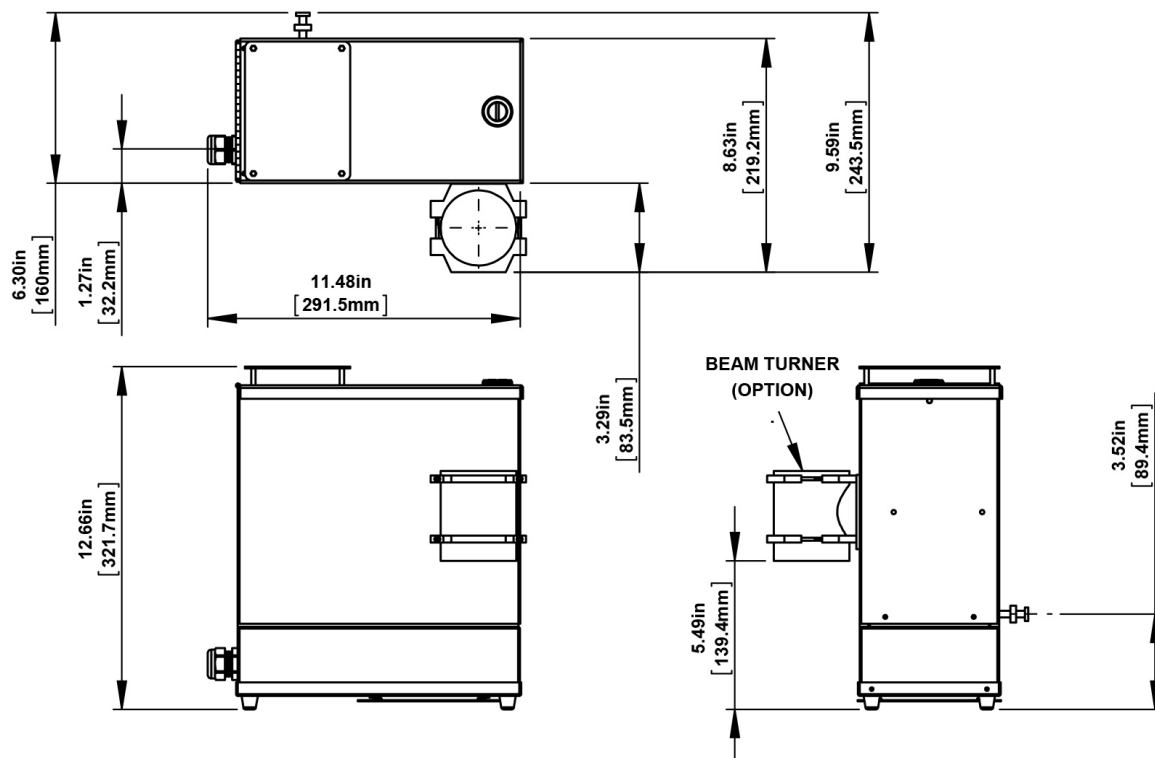
Part Number: 210064
Revision Level: B



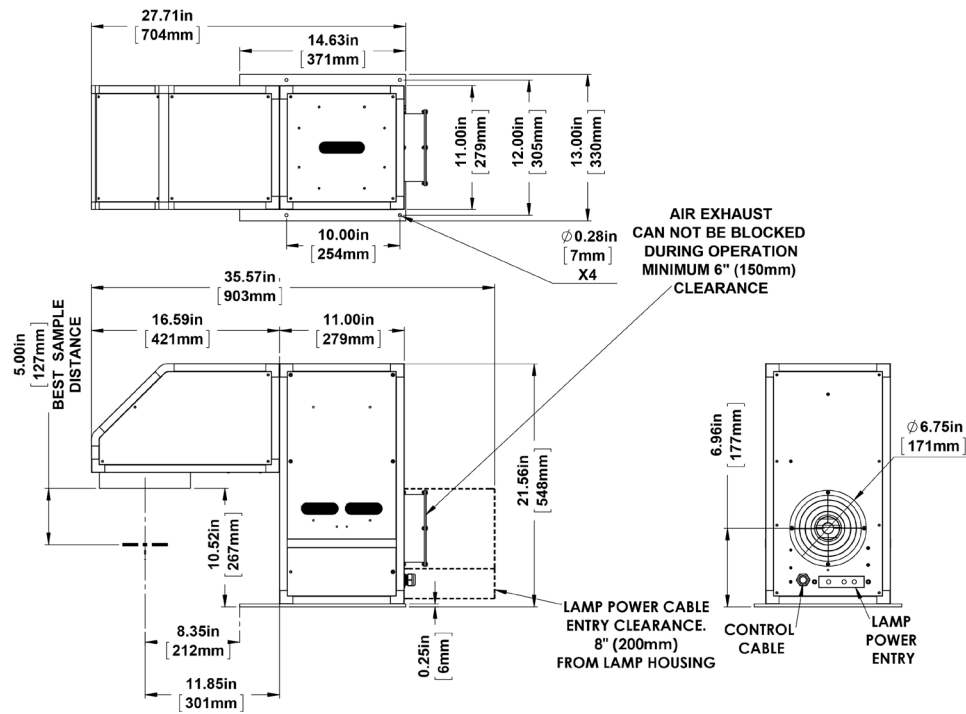
16S-Series 150W 0.8 Inch (2 cm) Solar Simulator Outline Drawing



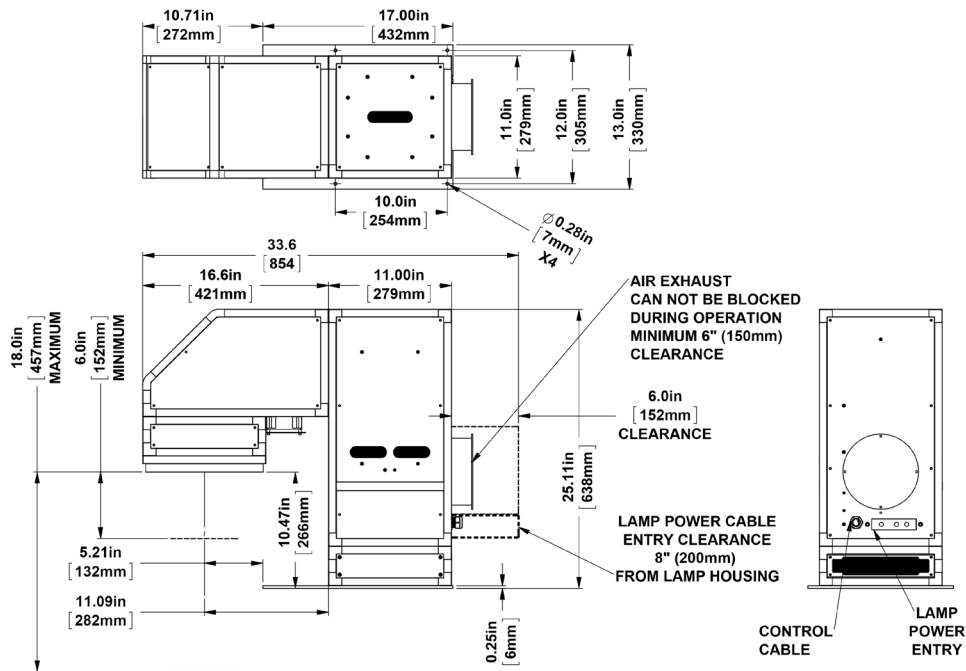
16S-Series 300W 1.2 Inch (3 cm) Solar Simulator Outline Drawing



LS1000-Series 2 Inch (5 cm) and 4 Inch (10 cm) UV Solar Simulator Outline Drawing



LS1000-Series 6 Inch (15 cm) UV Solar Simulator Outline Drawing



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.

