

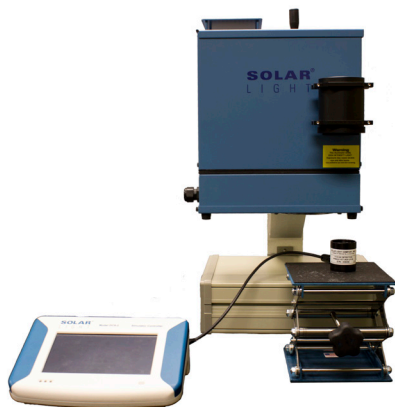
Solar Light Company, LLC has been the foremost name in light sciences since we invented the world's first Solar Simulator in 1967. Our state of the art single output **16S-Series Solar Simulators produce solar UV radiation** in the 290-400nm range, and can be quickly and easily configured by the user 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. 16S-Series 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.



### Features and Benefits

- > 90% Uniformity In Beam's Central Usable Area
- Standard and Customizable Simulators Validated to Comply with ASTM, IEC, and ISO Standards
- CE Compliant
- Custom-Designed Spectra Available
- 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
- 150W Models available in 0.4" (1 cm,) 0.8" (2 cm,) and 1.2" (3 cm) round beam output
- 300W Models available in 0.8" (2 cm,) 1.2" (3 cm,) 2.2" (5.7 cm,) and 3" (7.5 cm) round beam output
- Beam Orientation Can Be Specified As Vertical Downward, Vertical Upward, or Horizontal
- Optional Filters Allow for User Changeable Spectra (UVA only, UVB only, and UVA+B)
- 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 Available For Various Applications

Prepackaged kits are available direct from the factory, which combine these state of the art 16S-Series Solar Simulators with our innovative Automatic Dose Controllers, advanced Data Logging Radiometers, NIST-traceable Sensors, and other hardware to form complete turnkey solutions for the most popular applications, including:

- Pre-Irradiation of PMMA Plates used in In-Vitro Broad Spectrum Sunscreen Testing
- SPF Testing
- Fade and Color Fastness Testing
- Materials Testing
- Academic Research
- General Purpose Irradiation



**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.



**Professional Grade Radiometers** provide multi-functional data logging capability, and compatibility 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 UV, Visible, IR wavelengths as required for any testing application. Over 130 different sensor models available for custom configurations.



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



16S-Series 150W Models				16S-Series 300W Models			
SPECIFICATION	16S-150-0.4-UV	16S-150-0.8-UV	16S-150-1.2-UV	16S-300-0.8-UV	16S-300-1.2-UV	16S-300-2.2-UV	16S-300-3-UV
<b>Output Beam Size</b>	0.4" (1 cm)	0.8" (2 cm)	1.2" (3 cm)	0.8" (2 cm)	1.2" (3 cm)	2.2" (5.7 cm)	3" (7.5 cm)
<b>Beam Orientation</b>	Vertical Downward, Vertical Upward, or Horizontal (for all models - please specify at order)						
<b>Lamp Type</b>	Xenon Short Arc (For All Models)			Xenon Short Arc (For All Models)			
<b>Lamp Wattage (Nominal)</b>	150W (For All Models)			300W (For All Models)			
<b>Beam Uniformity</b>	±5% (For All Models)			±5% (For All Models)			
<b>Spectral Match Classification</b>	A (IEC 60904-9 2007)			A (IEC 60904-9 2007)			
	A (JIS C 8912)			A (JIS C 8912)			
	A (ASTM E927 - 05)			A (ASTM E927 - 05)			
<b>Temporal Instability Classification</b>	A (IEC 60904-9 2007)			A (IEC 60904-9 2007)			
	A (JIS C 8912)			A (JIS C 8912)			
	A (ASTM E927 - 05)			A (ASTM E927 - 05)			
<b>Uniformity Classification</b>	B (IEC 60904-9 2007)			B (IEC 60904-9 2007)			
	B (JIS C 8912)			B (JIS C 8912)			
	B (ASTM E927 - 05)			B (ASTM E927 - 05)			
<b>Light Ripple</b>	< ±2% rms			< ±2% rms			
<b>Horizontal Beam Working Distance</b>	3" (7.6 cm)	7.1" (18 cm)	11.8" (30 cm)	5.9" (15 cm)	7.1" (18 cm)	18.5" (47 cm)	n/a
<b>Vertical Beam Working Distance</b>	n/a	2.4" (6 cm)	3.9" (10 cm)	2.4" (6 cm)	3.9" (10 cm)	18.1" (46 cm)	18.5" (47 cm)
<b>Long Term Drift (&lt;4 Hours)</b>	<0.1%			<0.1%			
<b>Power Limit</b>	Factory Set Limit is 150 watts max			Factory Set Limit is 320 watts max			
<b>Operating Temperature</b>	32°F to 95°F / 0°C to 35°C			32°F to 104°F / 0°C to +40°C			
<b>Storage Temperature</b>	-4°F to 185°F / -20°C to +85°C			-4°F to 185°F / -20°C to +85°C			
<b>Humidity</b>	0 to 95% non-condensing			0 to 95% non-condensing			
<b>Cooling</b>	Forced air			Forced air			
<b>Medical Safety Certifications</b>	EN61010-1 Laboratory, EN60335 Appliances, IEC60601-1 Medical						
<b>EMI/EMC</b>	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						
<b>Weight</b>	7 lbs (3.2kg)	7 lbs (3.2kg)	7 lbs (3.2kg)	10.5 lbs (4.8kg)	10.5 lbs (4.8kg)	10.5 lbs (4.8kg)	10.5 lbs (4.8kg)
<b>Reference Cell</b>	Calibrated (Optional on all models)			Calibrated (Optional on all models)			

Part Number: 210078

Revision Level: B

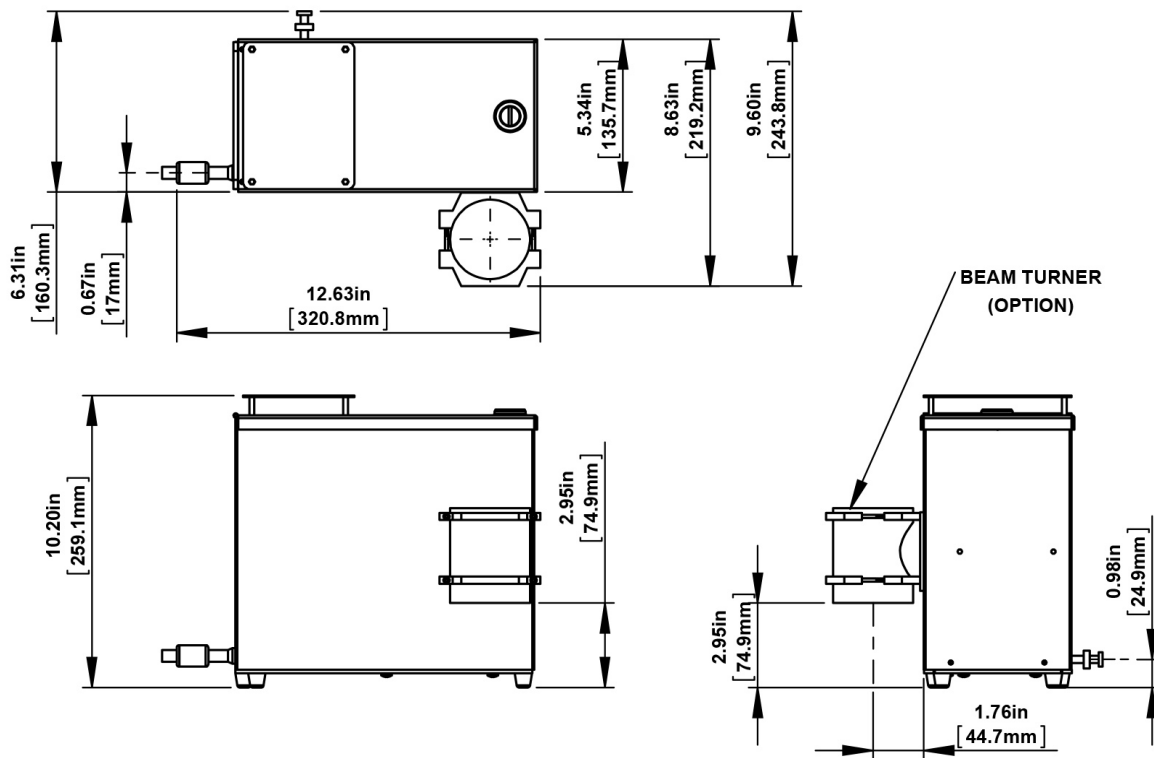
Specifications subject to change without notice.

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

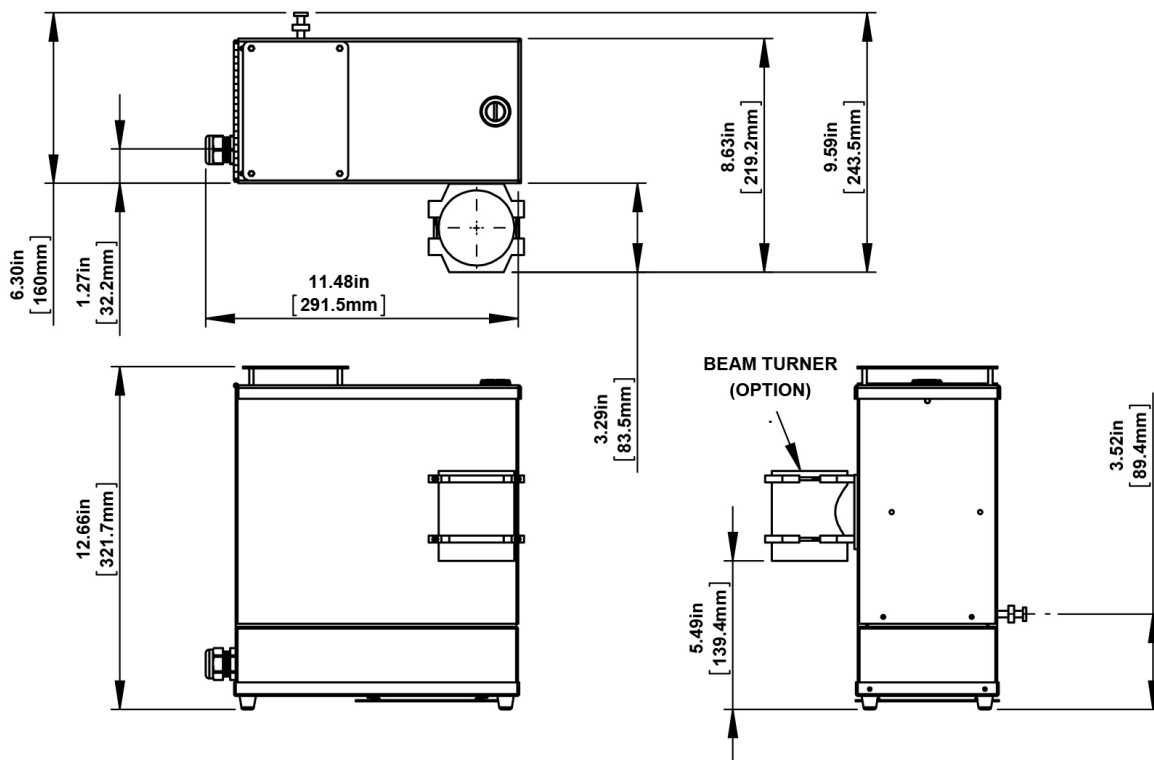
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## 16S-Series 150W 0.8 Inch (2 cm) Solar Simulator Outline Drawing



## 16S-Series 300W 1.2 Inch (3 cm) 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.



Compliant



Compliant



ISO 24443 Compliant



Compliant



Compliant