

**SCIENCETECH**

# FULLY REFLECTIVE SOLAR SIMULATOR SS150



## Features

- Class AAA solar simulators
- Xenon short arc lamp
- Fully reflective optical system
- No chromatic aberration
- A variety of available filters
- Modular design
- Many optional components

## Applications

- Photovoltaic testing
- Exposure testing
- Light bleaching
- High UV tests

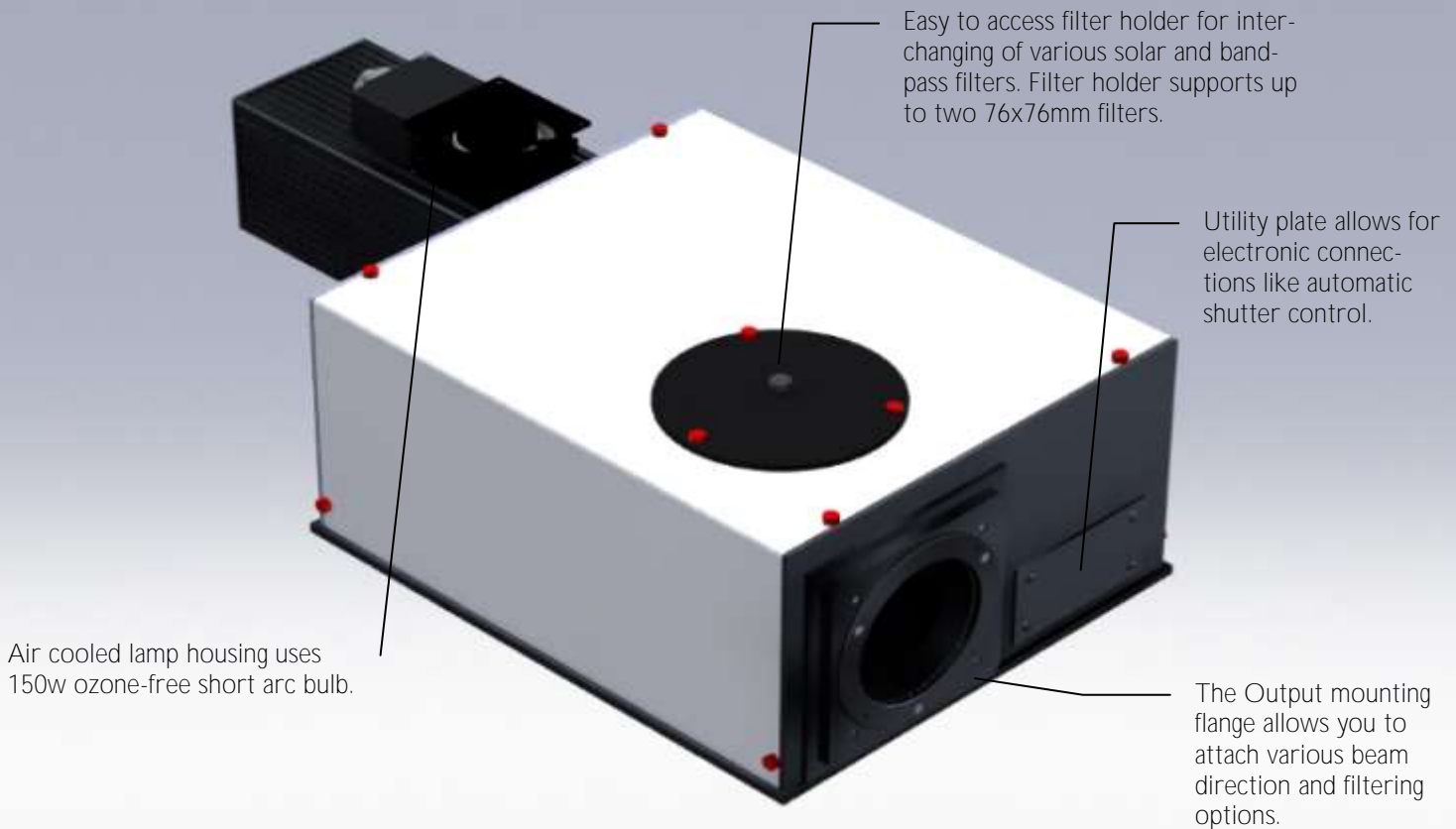


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# FULLY REFLECTIVE SOLAR SIMULATORS SS150



Sciencetech was the first manufacturer of Class AAA Solar Simulators using 150W sources, and continues to innovate with high efficiency systems. The **SS150 is Sciencetech's smallest** fully reflective model available making it extremely portable and easy to use. **Sciencetech's proprietary fully reflective** design uses metal coated mirrors and passes the whole spectrum without compromise. This is a distinct advantage over refractive based systems that are limited by the properties of the transparent material used.



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## NON-UNIFORMITY

Item Number	Model #	Target Diameters (cm) 1 Sun		
		Class A	Class B	Class C
160-9001	SS150	5	6.5	7.5

## SPECTRAL MATCH

Range (nm)	ASTM AM 1.5G	Sciencetech FRSS AM 1.5G	ASTM AM 0	Sciencetech FRSS AM 0	Class A Match
300-400			8.0%	7.3%	PASS
400-500	18.40%	15.12%	16.4%	17.7%	PASS
500-600	19.90%	17.54%	16.3%	17.0%	PASS
600-700	18.40%	19.67%	13.9%	14.1%	PASS
700-800	14.90%	15.63%	11.2%	10.5%	PASS
800-900	12.50%	12.34%	9.0%	9.2%	PASS
900-1100	15.90%	19.70%	13.1%	14.0%	PASS
1100-1400			12.2%	10.2%	PASS

## TECHNICAL SPECIFICATIONS

Collimation Angle ( $\pm$ degrees)	2.5 degree divergence
Typical Power Output (mW/cm <sup>2</sup> at target )	100
Uniformity	<2%
Uniformity Classification	A (ASTM E927-05)
Temporal Instability	<2%
Temporal Instability Classification	A (ASTM E927-05)
Spectral Match	See table
Spectral Match Classification	A (ASTM E927-05)
Working Distance (cm)	76 +/- 2.5 cm
Lamp Power Requirements	150W
Line Regulation Requirement	0.01%



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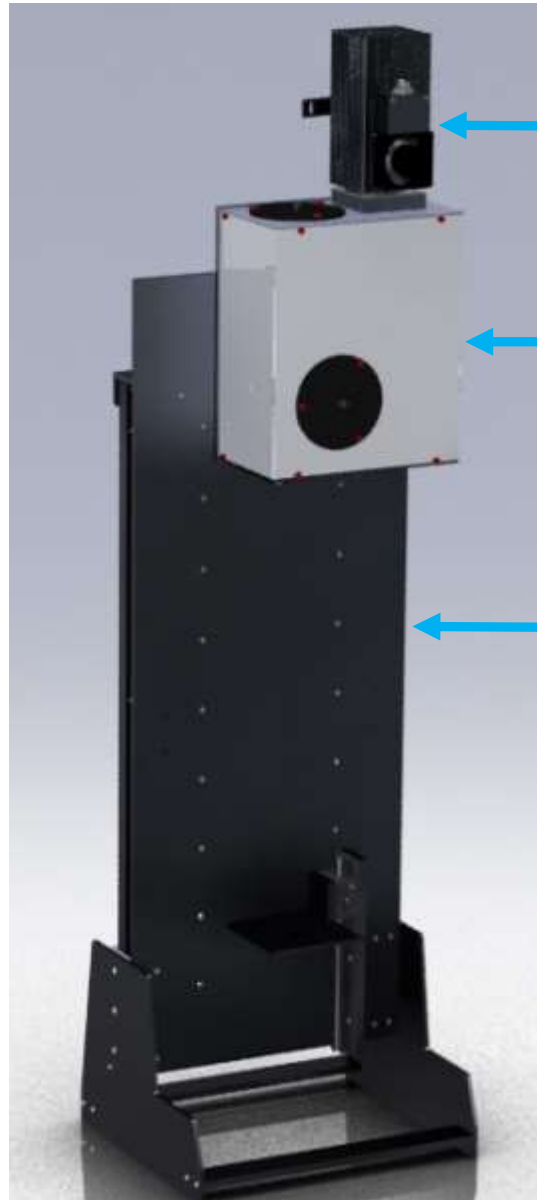
# FULLY REFLECTIVE SOLAR SIMULATORS SS150

Sciencetech's fully reflective solar simulators can be configured to suite your requirements.

The homogenizer can be customized to include a computer controllable shutter and the lamp housing can be customized to include a light intensity stabilizer.

A range of solar cell chucks with options such as vacuum clamps, thermoelectric or water cooling, micropositioners as well as complete IV testing software and hardware are also available.

The model SS150 can be mounted on a vertical stand for downward facing operation.



Lamp Housing  
Configuration Options

Homogenizer  
Configuration Options

Body Configuration  
Options

## CONFIGURATION OPTIONS

Lamp Housing Configuration Options	
(FS-02) Light Intensity Stabilizer	115-9021
Spare Lamp, 150W Xe, Ozone Free	650-0055
Homogenizer Configuration Options	
(SSES) Computer Controlled Shutter	160-8004
(CTBT) Beam Turner Assembly	160-9009
Body Options	
(DFS-150) Downward Facing Vertical Stand. Includes mounting plate, target table, foot base.	160-9013
(BASE-SS-ROLL) Solar Simulator Base Assembly with Castors	165-8048
Complete Package Options	
(SS-150A/DFS) SS150 with Downward Facing Stand. Includes SS150, Power Supply, External Igniter and DFS-150	160-9021



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## FILTER OPTIONS

Item number	Description
Filter Holder	
100-8035	<b>3" filter holder for SS style filters, 2.5 mm thick maximum</b>
Spectral Filters—near 0 degree— <b>3" filter slot in homogenizer</b>	
640-9005	75 mm Mesh 34% Neutral Density Filter with Holder
640-9006	75 mm Mesh 49% Neutral Density Filter with Holder
640-9007	75 mm Mesh 71% Neutral Density Filter with Holder
640-9011	Visible longpass filter 400±6 nm, with Holder
640-9012	<b>Hot Mirror for UV applications, 3" Square</b>
640-8014	Pass UVA, block UVB, VIS, and IR
640-9014	Pass VIS-IR, Block UVA+B – 0 degree option (WG395)
640-9017	Pass UVA-VIS, IR ; block UVB
640-9016	Pass UVA+B, Block VIS, IR – 0 degree option
640-8012	Pass UVA+B, pass some IR Block VIS – 0 degree option
640-0120	Pass UVB Block UVA and above
Air mass filter – near 0 degree incidence	
160-8020	Air Mass AM0 filter for SS serious solar (Standard Range)
160-8022	Air Mass AM0 filter for SS serious solar (Standard Range)
160-8024	Air Mass AM0 filter for SS serious solar (Standard Range)
160-8026	Air Mass AM0 filter for SS serious solar (Standard Range)
160-8028	Air Mass AM0 filter for SS serious solar (Standard Range)
Homogenizer IR water filter	
100-8018	<b>IR water filter, 3" Stainless steel, Fused Silica Window</b>
Beam turning filter – 45 degrees – used with 165-8034	
640-8004	Pass VIS, block UV, IR – CTBT option
640-8008	Pass IR, Block VIS, UV
640-8011	Pass UVA+B, block VIS, IR – CTBT option

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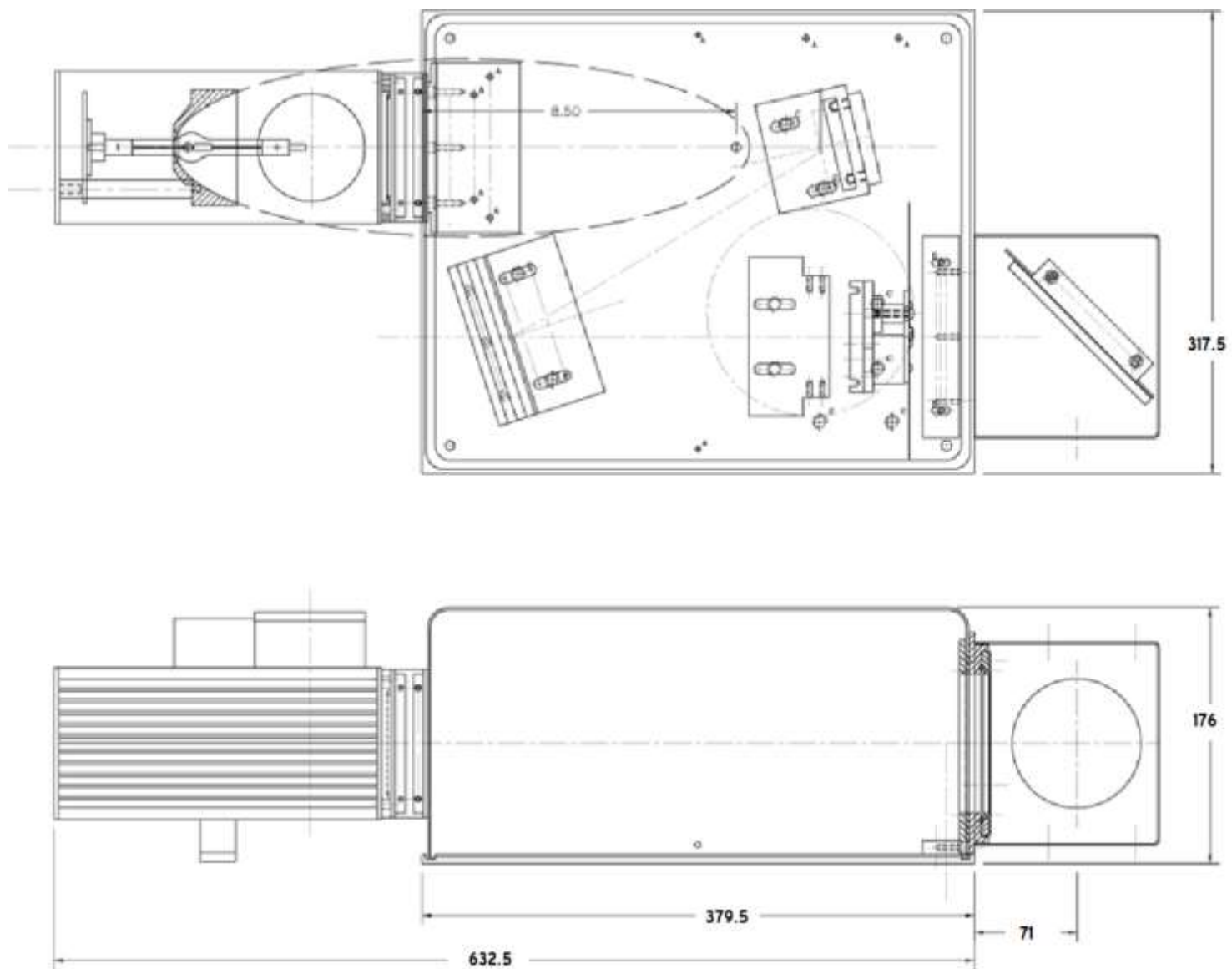
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CONTACT US FOR A QUOTE  
OR  
TO TELL US ABOUT YOUR  
CUSTOM APPLICATION

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## DIMENSIONS (CM)



SS150

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