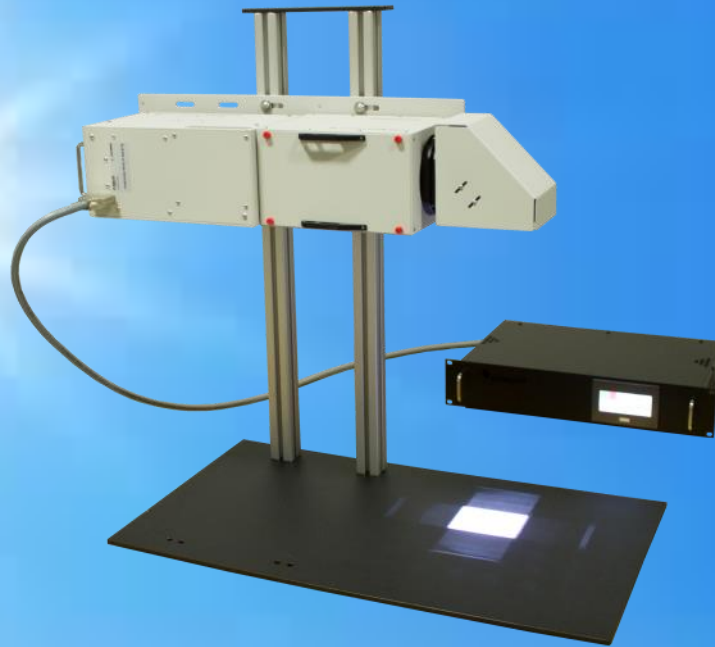


Small Area Solar Simulators

SciSun series



Features

- Class AAA specification (ASTM, IEC)
- Illumination area: 50x50mm
- Touchscreen power supply with control software included
- Manual shutter included (electronic shutter available)
- Variable attenuator from 0.1–1.1 sun
- Plug and play operation
- Long working distance can facilitate glovebox integration

Applications

- Photovoltaic Testing
- Environmental Testing
- Photobiology and Photochemistry
- Material and degradation testing

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Small Area Solar Simulators

SciSun series

Overview

Sciencetech's line of SciSun solar simulators are easy to use, economically priced, and technically superior. The SciSun line is designed for researchers who do not require a large field of illumination. They can produce up to **2 Suns** and feature Class AAA specifications.

The SciSun series provides a flexible output orientation that can be adapted to different requirements. The standard configuration is downward-facing, with an AM1.5G filter included; however, a horizontal output can be achieved easily.

*non-LP series only.

The solar simulator includes:

- arc lamp housing with integrated igniter
- xenon arc lamp
- touchscreen power supply interface*
- power supply control software*
- manual variable attenuator
- filter holder
- height-adjustable stand (non-LP versions only)
- beam turner (variable illumination directions)
- quality control report

STANDARDS

SciSun solar simulator specifications listed are according to ASTM E927-19 and IEC-60904-9 unless otherwise stated. We can accommodate testing to match several standards.

Specifications

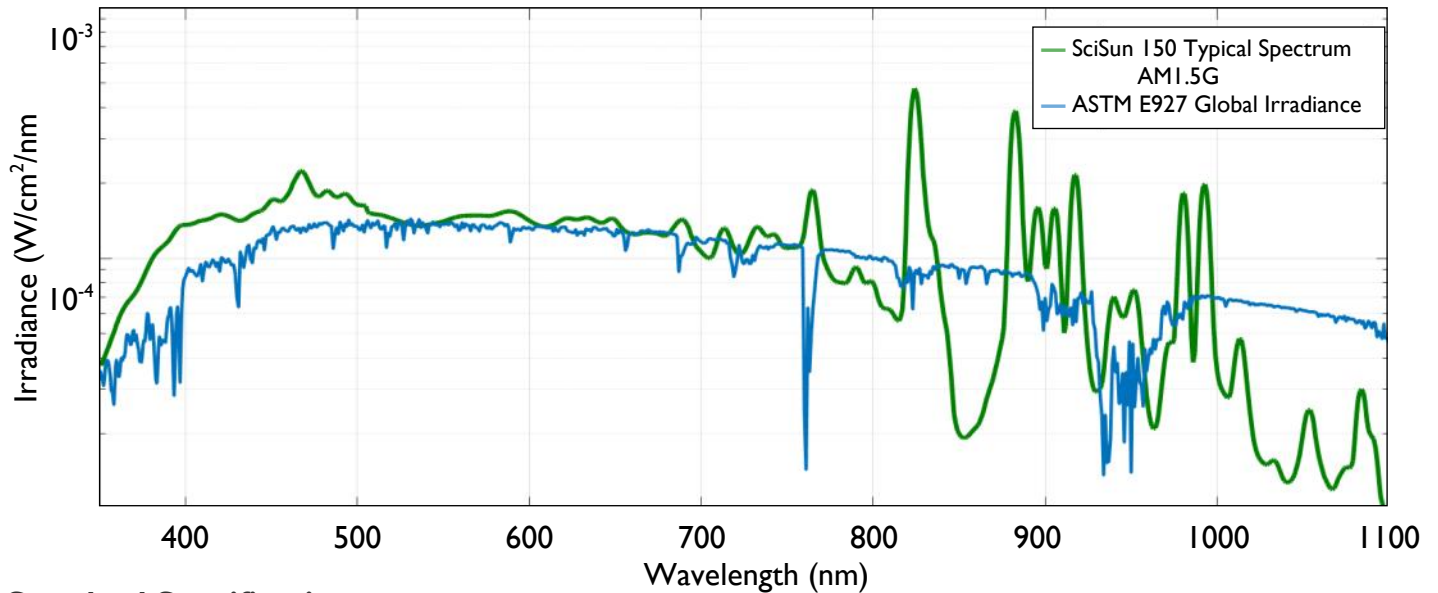
Model	SciSun-300	SciSun-LP-300	SciSun-150	SciSun-LP-150
Part Number				
Target Area	50 × 50 mm			
Irradiance Uniformity	Class A			
Irradiance at Target (AM1.5G Sun=100mW/cm ²)	Up to 2 Sun		Up to 1 Sun	
Lamp Wattage (watts)	300		150	
Spectral Match AM 1.5G	Class A			
Lamp Type	Xenon Short Arc , Ozone free			
Temporal Stability	Class A			
Working Distance (mm)	380 ± 15			
Manual Shutter	Included			
Manual Variable Attenuator	Included	Available	Included	Available
Dimensions (L×W×H)	535 × 183 × 188 mm			
Weight (kg) Without power supply	8.5 + 8 (stand)			
Power Requirements	110-240V, 50Hz/60Hz , 450W		110-240V, 50Hz/60Hz , 250W	
Stability / Ripple / Regulation	0.05% / < 1% / 0.02% current variation for 5V line charge			

Please note: Due to our continuous improvement system, all specifications are subject to change without notice.

Small Area Solar Simulators

SciSun series

Standard Specifications and Features



Standard Specifications

Class A Spectral Match:

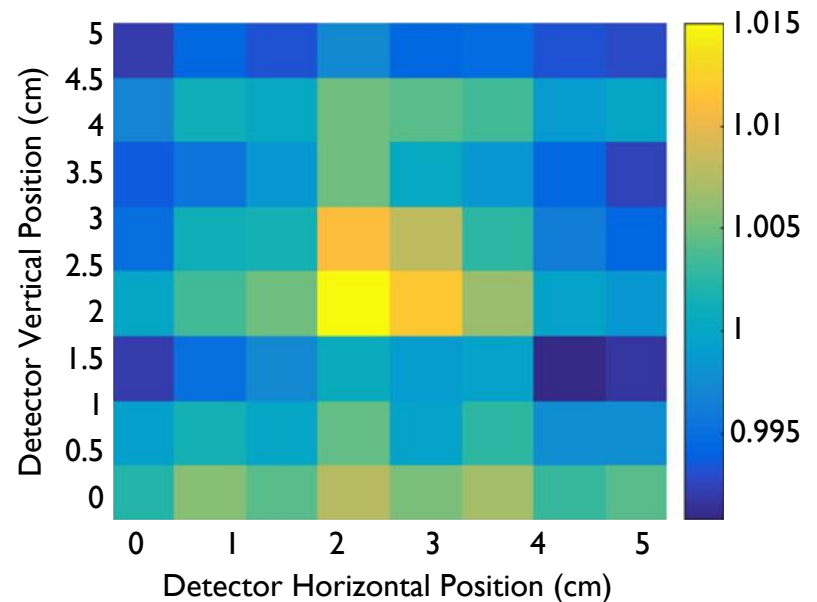
SciSun solar simulators match Class A spectral match when used with a compatible air mass filter (sold separately; see above using an AMI.5G filter).

Class A spatial non-uniformity:

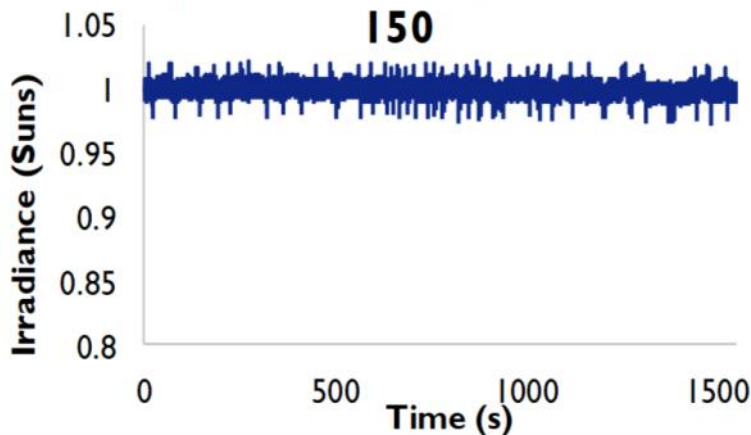
SciSun solar simulators meet Class A spatial non-uniformity by default (see right). Class B may also be available over larger target sizes upon request.

Class A Temporal Instability:

SciSun solar simulators meet Class A temporal instability.



Temporal Instability of SciSun-150



STANDARDS

SciSun solar simulator specifications listed are according to ASTM E927-19 and IEC-60904-9 unless otherwise stated. We can accommodate testing to match several standards.

Matching to ASTM E927-19 is provided by default. Please specify upon ordering if matching IEC-60904-9 standards is required.

Small Area Solar Simulators

SciSun series

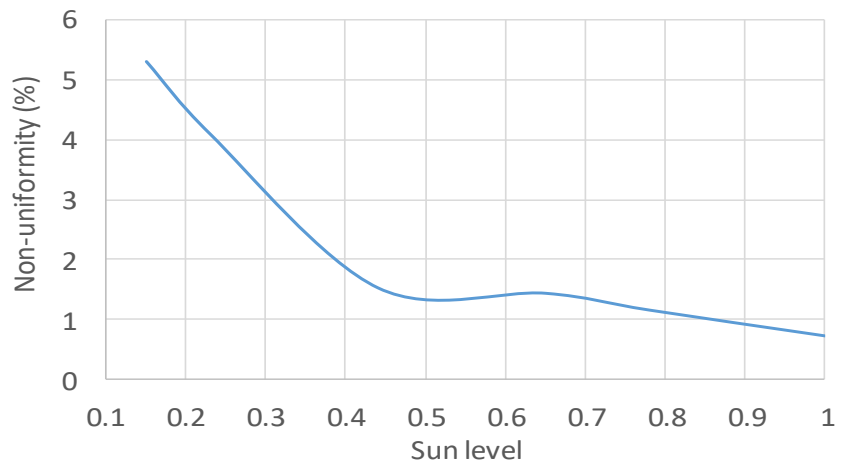
Standard Features

Spectral Filter Options	
Model	Description
AMI.5G-FT-3	AMI.5G Filter—Class A
AMI.0D-FT-3	AMI.0D Filter—Class A
AMI.5D-FT-3	AMI.5D Filter—Class A
AM0-FT-3	AM 0 Filter—Class A*

Variable Aperture VAR-ATTN-M

Sciencetech's SciSun solar simulators include a variable aperture component, which allows variation of the output irradiance level without adjusting the power supply. The range of attenuation is continuously variable from 0.1 - 1 sun. This enables easy change between output irradiance values. Irradiance values lower than 1 sun increase the system's non-uniformity.

Non-uniformity of SLB solar simulator output by sun level using VAR-ATTN-M attenuator



POWER SUPPLY

Sciencetech's 601-series power supplies are included with Sciencetech's Sci-Sun series solar simulators.

Standard features included with Sciencetech's 601-series power supplies:

Touchscreen interface

- Shutter and exposure control*
- Single connection for lamp power, cooling, and communication
- Lamp starts and timer log
- Fan cooling safety interlock
- RS232 software GUI included

FILTER BOX ASSEMBLY

This system has a modular optics assembly which can hold a range of filters in Sciencetech's standard FT style filter holder. The most popular options are AM filters; however a range of other filter options are available such as bandpass filters and neutral density filters.

*ASTM E927-19

Class A from 350 to 1100nm

Class C from 1100 to 1400nm

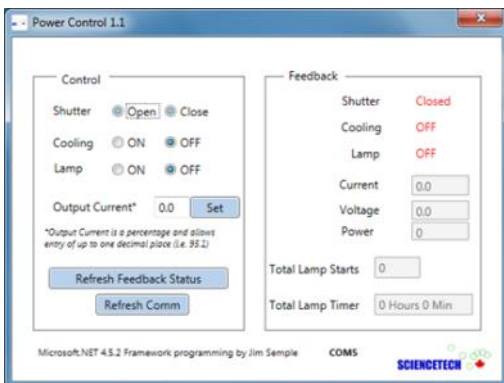
The SciSun-LP series features the EPS-series simplified power supply, which lacks a touchscreen, computer control, or control of electronic accessories.



601-series touchscreen power supply main control screen



601-series touchscreen power supply automatic shutter control screen



Software GUI for power supply control



601-series power supply

* if electronic shutter is supplied

Small Area Solar Simulators

SciSun series

Popular Accessories



SOL-METER (125-9011)

Solar Power Meter, a digital meter for use with solar calibrated detectors (e.g. SSIVT-REF or SC-LT-Q)



SSIVT-REF (125-9007)

SSIVT Reference Detector



SC-LT-Q (585-0154)

Calibrated Reference Cell, Quartz Window, traceable to NIST and NREL.



SSIVT-20C (175-9103)

20W IV Tester for Continuous Solar Simulators (current range = 1 A, voltage range = 200 V)



SCI-SCC3-TE (165-8202)

3.5" x 3.5" Solar Cell Chuck, TE Cooled, Computer controllable, Vacuum Ready**



SCI-SCC3-L-B (165-8221)

3.5" x 3.5" Solar Cell Chuck, Liquid Cooled, Rear Contact**



SCP-4T (165-8211)

Probe Station, 4 Probes, Tungsten Needle-tip Kelvin Probes***



SCI-REF-NL (125-9028)

A simple PCB mounted solar cell, as a reference cell. No load.



HAS (101-8024)

Height-adjustable stand.



MF-49-FT-3 (640-9006)

Wire mesh neutral density filter capable of blocking 49% of incident light. 75 mm diameter.



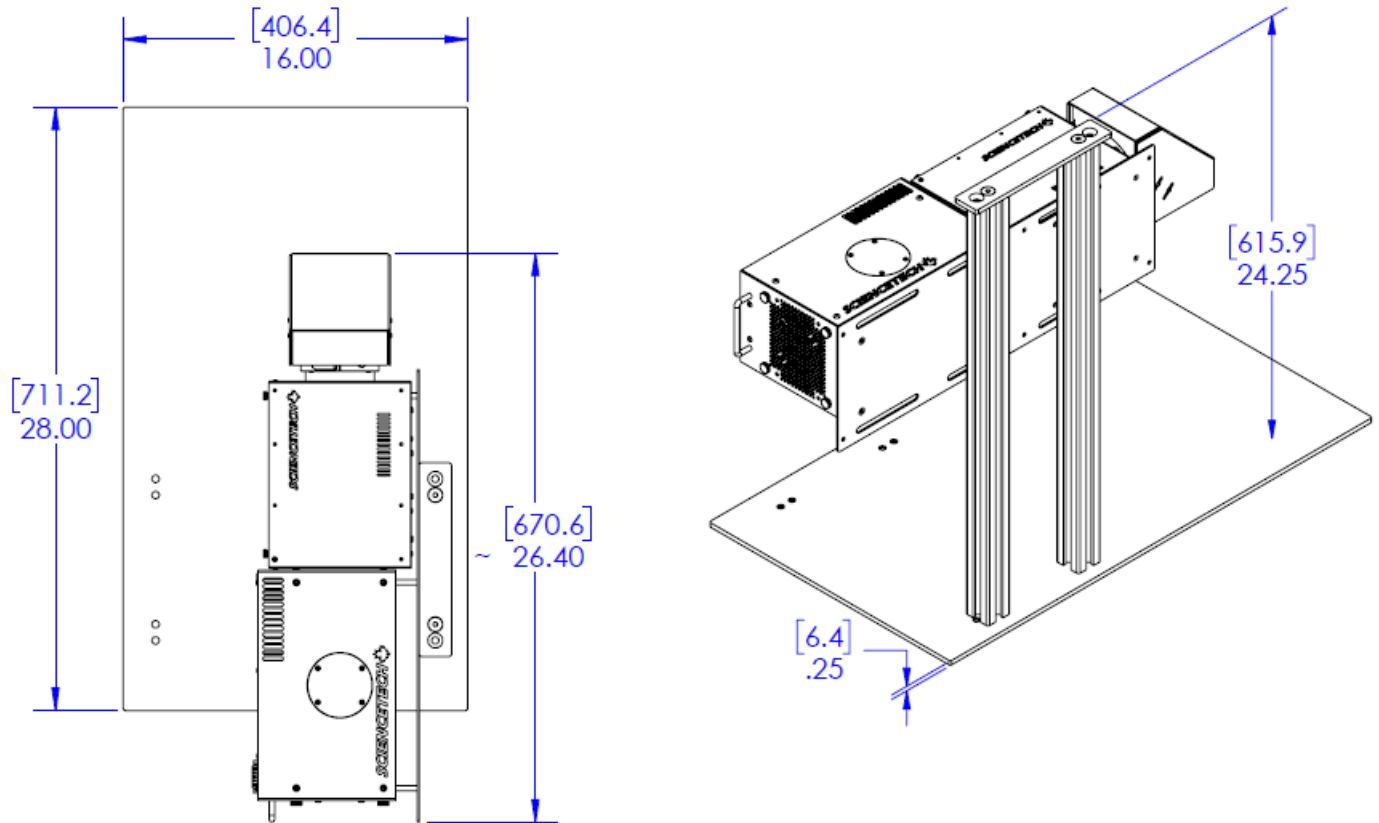
SH-LH (127-9005)

Computer controlled shutter. Installs inside SciSun (non-LP versions only).

Small Area Solar Simulators

SciSun series

6. Dimensions



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Dimensions are in [mm] and inches.