

# Small Solar Simulator Workstations

## SL series



### Features

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- Complete Design
- Up to Class AAA Specification
- Touchscreen Power Supply Interface Included
- Lamp Life Timer
- Turn Key Operation
- Electronic Shutter Included
- Adjustable-height Sample Stage
- Multiple Optional Accessories

### Applications

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- Photovoltaic Testing
- Environmental Testing
- Display Inspection

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# Small Solar Simulator Workstations

## I. Overview

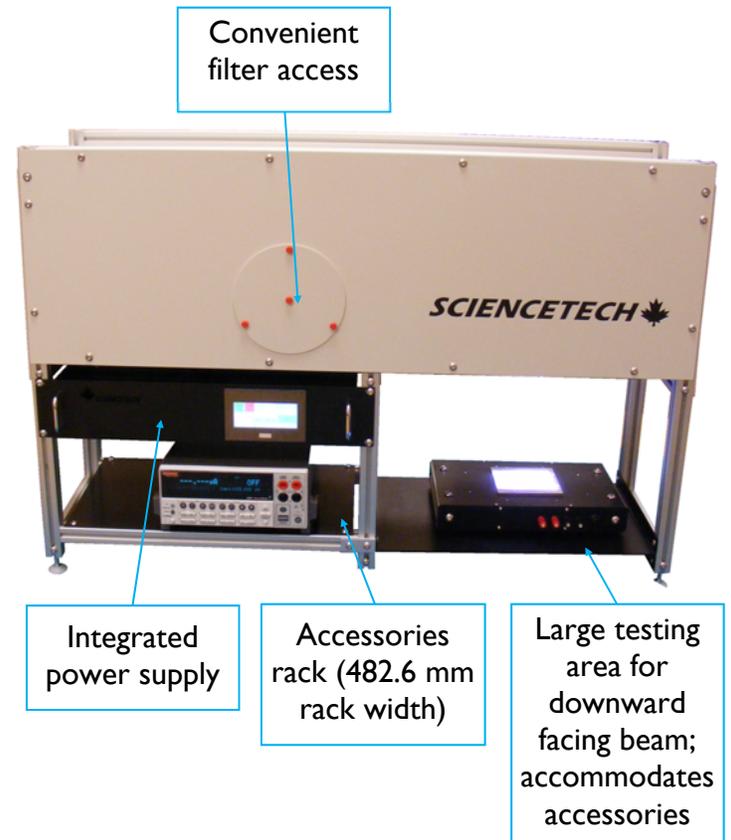
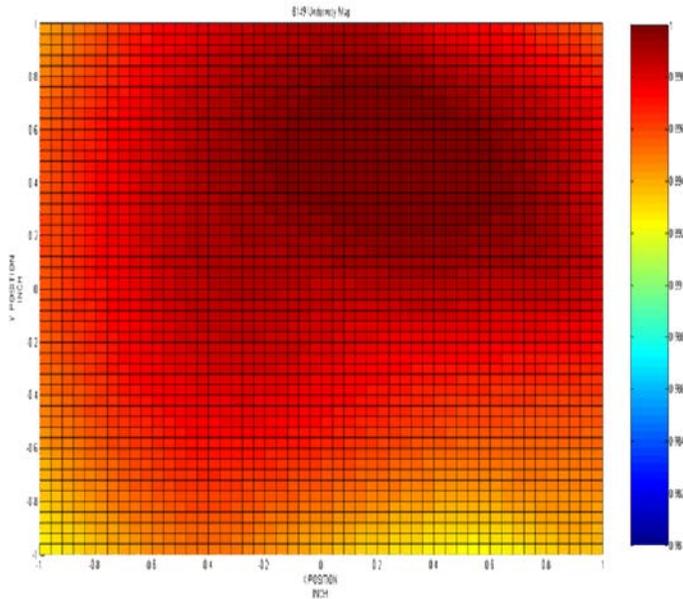
Sciencetech offers complete bench-top solar simulator systems in the SL series lens-based designs. SL series solar simulators can produce 1 Sun or more (with an AM filter) and are available in Class A or B uniformity. The target size varies by model number.

The SL series solar simulators provide an AM1.5G match and is an excellent choice when collimation and significant UV light are not needed.

The SL series solar simulators feature a convenient benchtop configuration with included automatic shutter, beam turner for vertical beam orientation, and 2-position filter holder. The system includes RS232 controllability and software for exposure control.

Air mass filters are available and sold separately.

### Non Uniformity of SL50A over 50 mm by 50 mm Area



SL-50A with front plate removed



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## 2. Specifications

Model	SL-38A-WS	SL-50A-WS	SL-60A-WS
Part Number	166-9023	166-9024	166-9025
Uniformity	< 2%	< 2%	<5%
Uniformity Classification†	A	A	A
Spectral Match Classification†	A (AM0 not available)		
Spectral Range (nm)*	350-1400		
Temporal Stability Classification†	A		
Target Size (mm)	38 × 38	50 × 50	60 × 60
Target Size - Class B Uniformity (mm)	50 × 40	70 × 60	80 × 70
Working Distance (mm)	>250mm	>250mm	>300mm
Collimation	8 degree half angle		
Power Level at Target (AMI.5G Standard—100mW/cm <sup>2</sup> )	1 Sun	Up to 2 Suns	1 Sun
Lamp Power (W)	150	300	300
Power Supply Model	601-150	601-300	601-300
Dimensions (L × W × H) (mm)	940 × 280 × 610		
Weight (kg)	10		
Power Supply Input	110-115V/60 Hz or 220-240V/ 50Hz		
Output Power (W)	105-150	210-300	210-350
Operating Current (A)	8-12	14-20	14-20
Stability / Ripple / Regulation	<2% current variation for 5V line charge		

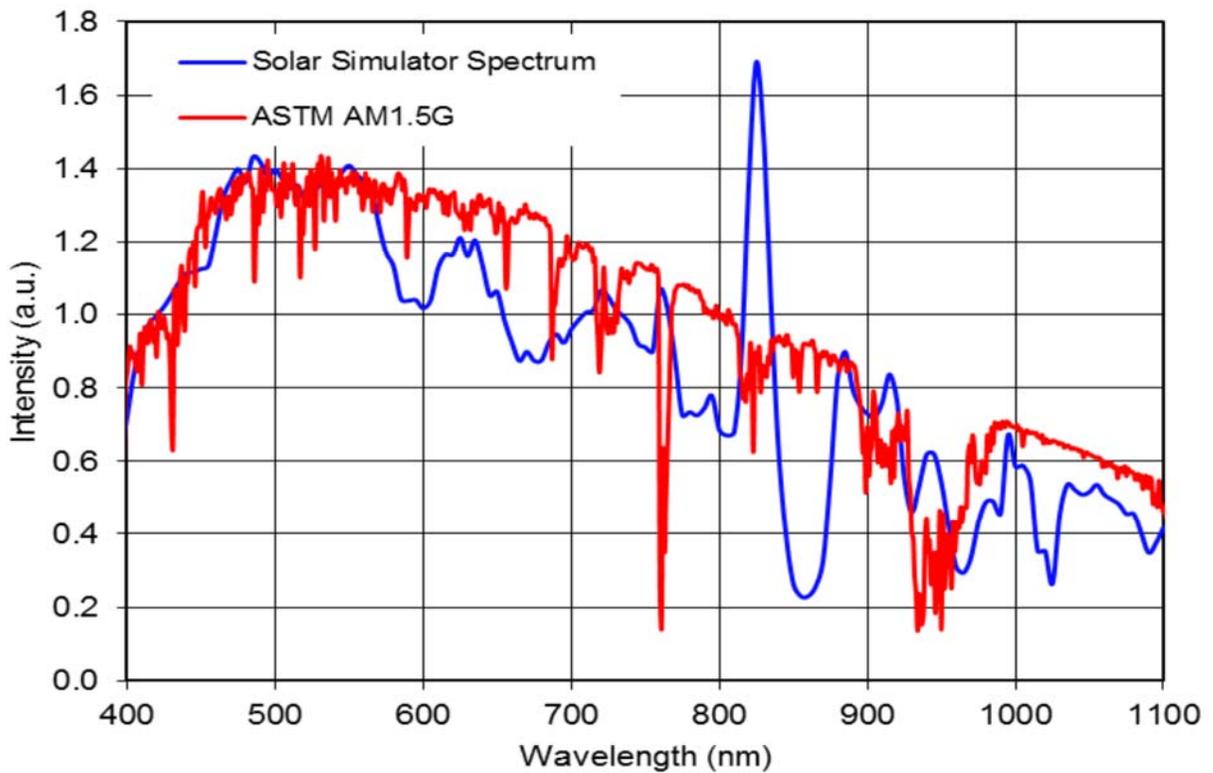
\* Range without filter.

† Standard system meets ASTM E927. For IEC 60904-9, and JIS-C8912 compliance please ask a Sciencetech technical representative for options



# Small Solar Simulator Workstations

## 3. Configuration—Wavelength Control



Solar simulator spectrum compared with ASTM AM1.5G solar spectrum

Sciencetech's SL series solar simulators include a two-position filter holder, with up to four filter positions available as an option. These can hold a range of filters in Sciencetech's standard filter holder.

The most popular options are AM filters; however, a range of other filter options are available.

Model	Description
160-8023	Air Mass AM1.5G Filter for SF/SLB Series Solar (Standard Range)
160-8025	Air Mass AM1.5D Filter for SF/SLB Series Solar (Standard Range)



[Browse Solar Filters](#)



[Browse all  
Filtering Options](#)

# Small Solar Simulator Workstations

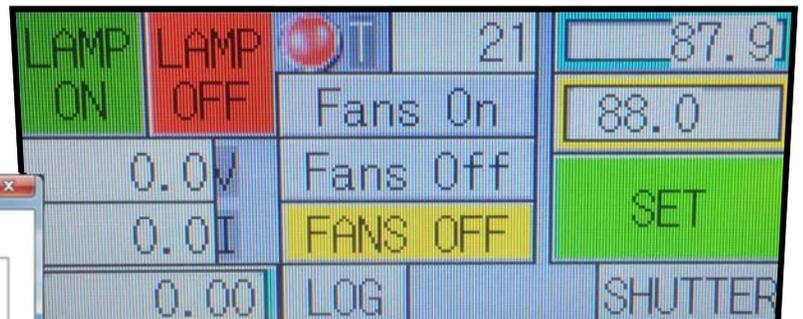
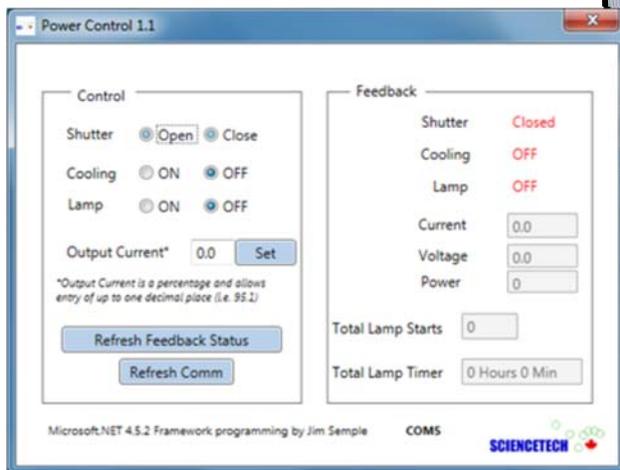
## 3. Configuration—Power Supply



Sciencetech's 601– series power supplies are the included power supplies for use with Sciencetech's SL-WS solar simulators

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

- Touchscreen interface
- Shutter and exposure control (if electronic shutter is supplied\*)
- Single connection for lamp power, cooling, and communication
- Lamp starts and timer log
- Fan cooling safety interlock
- RS232 software GUI included, shown below



### Optional Upgrades:

To be added to sales order as optional upgrades

- Temperature monitor
- Optical feedback
- Auto lamp starting

# Small Solar Simulator Workstations

## 4. Accessories

The SL series is an excellent complete benchtop system for solar simulation. Additional accessories are available to suit more specific applications.

Model	Description
<b>SSIVT-20C (175-9103)</b>	20W IV Tester for Continuous Solar Simulators
<b>SSIVT-REF (125-9007)</b>	Calibrated Reference Detector for Power Level Monitoring
<b>SOL-METER (125-9011)</b>	Digital Power Meter For Use With Reference Detector or Cell
<b>SOL-METER-D (125-9012)</b>	Digital Power Meter With SSIVT-REF Reference Detector
<b>SC-LT-Q (590-0154)</b>	NIST-Certified Reference Cell
<b>UV-Glasses-Drk (720-0159)</b>	Dark safety glasses
<b>Various</b>	Cell Chucks and Probe Stations (See Cell Chuck Brochure)
<b>SL-DARK</b>	The SL-DARK provides an enclosure around the sample area of the SL model workstation solar simulator. A light tight door on the front of the enclosure allows for samples to be installed. The rear of the dark chamber has a port for cable management into and out of the dark enclosure.



SOL-METER Digital Power Meter With SC-LT-Q NIST-Certified Reference Cell



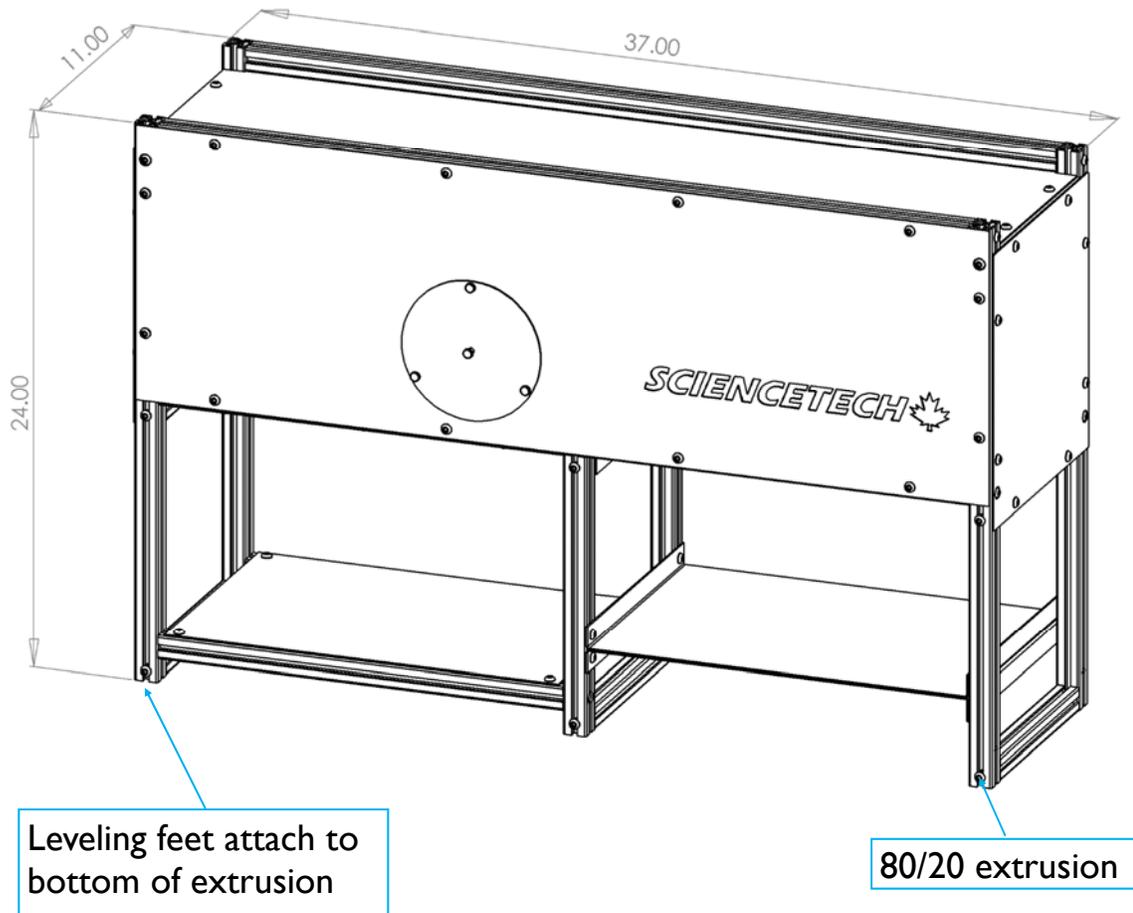
SOL-METER-D Digital Power Meter With Reference Detector

Contact a Sciencetech Technical Sales Representative for information on these accessories or to discuss your custom requirements!

- Cold mirrors for beam turning assembly
- Replacement lamps

# Small Solar Simulator Workstations

## 5. Dimensions



<b>OVERALL L x W x H (mm)</b>	940 x 280 x 610
<b>WEIGHT (kg)</b>	10 kg
<b>MOUNTING OPTIONS</b>	1/4-20 stud leveling feet 1" 80/20 extrusion