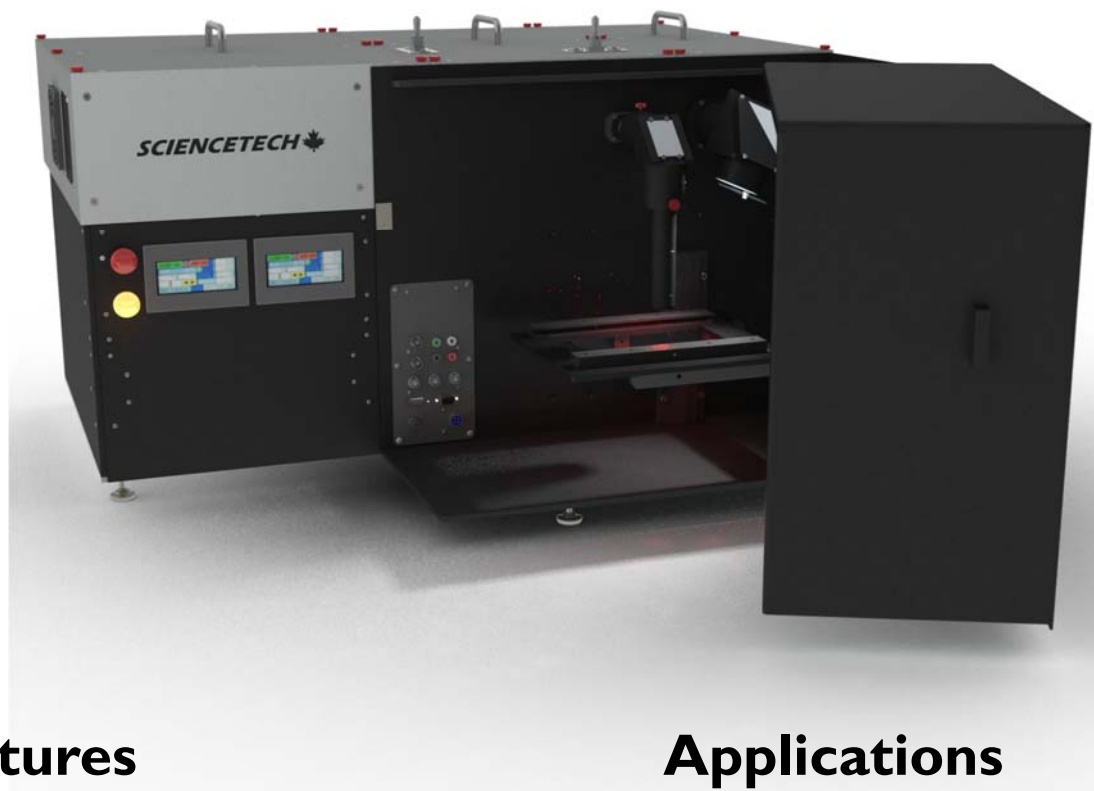


PTS-2-IQE

IPCE/Quantum Efficiency Measurement System



Features

- Spectral range 250-2500 nm
- 150W Xenon Arc Lamp
- Keithley 2400 source meter
- Stanford SR810 lock-in amplifier
- Light tight sample chamber
- User selectable bias voltage
- Manually controlled shutter

Applications

- Photovoltaic Testing
- IV Characterization
- Spectral Response, External and Internal Quantum Efficiency
- Photoconductivity Measurement



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Making Light Work Better

Specifications

Tunable Light Source	<ul style="list-style-type: none">• 150 W short arc Xe lamp, 1200 hour lifetime ¹• 250 - 2500 nm tuning/scanning range (Xenon)• Czerny-Turner design with adjustable bandpass 0.2 to 24 nm (1200 l/mm grating)• Motorized triple grating turret system (2 gratings included)• Adjustable Beam size (2.5mm diameter minimum with standard optics)• Includes hard coated order sorting filters
Bias Light Source	<ul style="list-style-type: none">• 150 W Short Xe arc lamp, average lifetime 1200 hours ¹• 25x25mm AAA, (ASTM E927-19) Solar Simulator• Includes mounted AM1.5G filter + additional filter slot.
Reference Detector	<ul style="list-style-type: none">• Broadband pyroelectric detector with quartz window• Calibrated range 250 - 2500 nm
Measurement System	<ul style="list-style-type: none">• Keithley 2400 source meter , maximum 20 W, 200V , 1A ²• Voltage accuracy 0.015% and current accuracy 0.22%• Measurement time period for 100 IV points is 44 s• Voltage bias user settable +/-10V capability• Stanford Lock-in Amplifier SR800 series (LIA-810)• Chopper 4-200Hz ³• Standard auto time constant feature• Internal quantum efficiency measurement determined from material reflectance measurement (hardware included) 300-1100nm range.• Temperature control available with upgrade ⁴• DC measurement mode available with upgrade ⁵
Software and Interface	<ul style="list-style-type: none">• Modern software, completely re-written in .NET• Compatible with Windows 7, 10 , 32/64bit• Data files exportable as ASCII• Pre-configured and tested control computer included• Built in microcontroller switches and monitors signals automatically• 1 USB port• 1 IEC 60320 C14 power entry inlet
Compliance	<ul style="list-style-type: none">• All systems come with user setup and installation check list• Quality control report including test results (calibration, spectral response, quantum efficiency and IV measurements)• Test cell included for verification (SCI-REF-NL)• Detailed user manual for software and hardware• Designed for compliance with ASTM E 1021-15 , ASTM E948, IEC 60904-8, IEC 60904-1
Power system	<ul style="list-style-type: none">• Single phase, configurable for 230 VAC, 50 Hz or 110 VAC, 60 Hz

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

Notes:

1) Other lamps available for customized systems

2) Extendable with upgrades

3) CH-60 Chopper with 0-50Hz range available

4) Add SCI-SCC3-TE cell chuck

5) DC-MODE

PTS-2-IQE

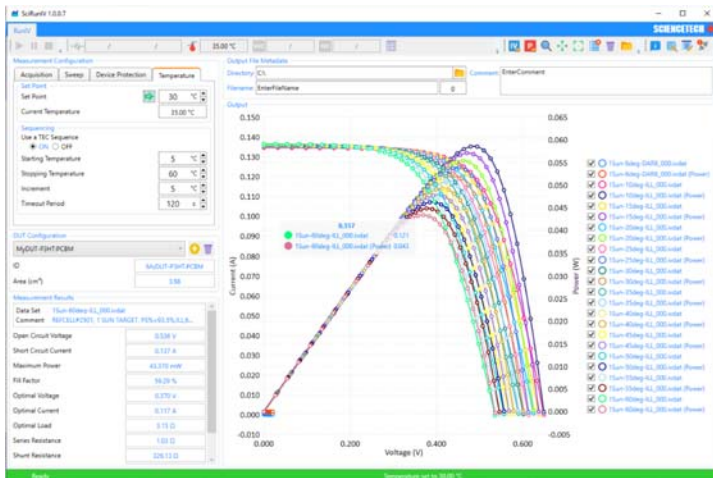
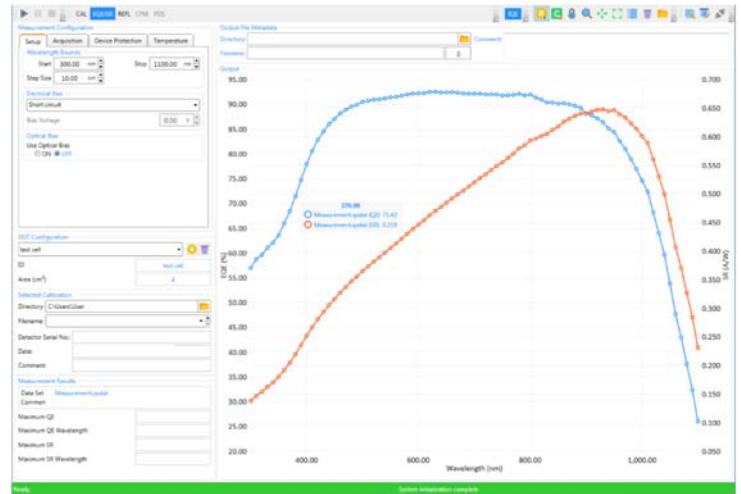
IPCE/Quantum Efficiency Measurement System

Software

SciPV software are provided with the PTS-2-QE system. SciPV has been completely re-written in .NET to provide an excellent user experience and advanced functionality.

SciPV Software Features

- Automated spectral response, external quantum efficiency, internal quantum efficiency, and reflectance measurements
- Acquired data and automation log stored in ASCII format
- Automated IV curves, Voc, Isc, Rshunt, Rs, Pmax, FF and efficiency measurements



Measurement Mode Upgrades Available:

- Add DC-MODE option for samples that cannot be measured with a chopped monochromatic probe beam
- Add SCI-SCC3-TE cell chuck for DUT temperature monitoring and control
- Add IV-MUX accessory to multiplex up to 6 4-wire signals

Popular Accessories

		
SCI-REF-NL (125-9011)	SCI-REF-Q (125-9029)	SC-LT-Q (585-0154)
A simple PCB mounted solar cell, as a reference cell. No load resistor.	Calibrated Reference Cell, Quartz Window, not traceable to NIST and NREL.	Calibrated Reference Cell, Quartz Window, traceable to NIST and NREL.
		
SCP-2T (165-8210)	SCI-SCC3-TE (165-8202)	SCI-SCC3-L-B (165-8221)
Probe Station, 2 Probes, Tungsten Needle-tip Kelvin Probes (other probe types available)	3.5" x 3.5" Solar Cell Chuck, TE Cooled, Computer controllable, Vacuum Ready (non cooled version also available)	3.5" x 3.5" Solar Cell Chuck, Liquid Cooled, Rear Contact (non cooled version also available, SCC3-B)
		
IV-MUX (175-8202)	SCC-VP (165-8217)	SCC-VPMEI (165-8267)
Multiplex up to 6 4-wire measurements. Integrates with PTS system.	Vacuum pump designed for use with Sciencetech's SCC cell chucks. 10psi of vacuum for small cells.	A powerful vacuum pump for holding larger cells, also exceptionally quiet at 45db

PTS-2-IQE

IPCE/Quantum Efficiency Measurement System

4. Dimensions in [mm] and inches

