# SPECTRAL EVOLUTION

## Testing a pulsed solar simulator for large solar panels

The Spectral Evolution SR-1901PT is a spectroradiometer designed to test spectral match, uniformity, and repeatability for pulsed solar simulators. Recently we were able to test a Spectrolab Large Area Pulsed Solar Simulator using the SR-1901PT.

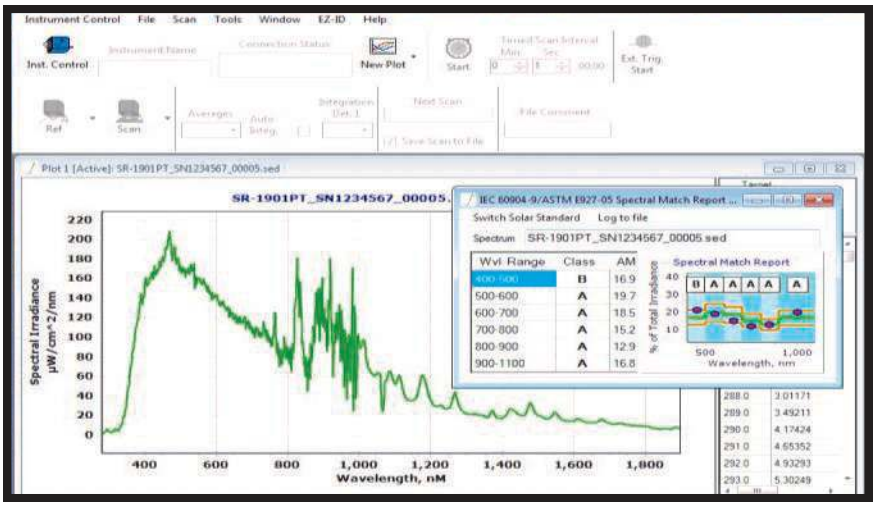
Solar simulators are used to simulate sunlight in testing the reliability and performance of solar cells and panels. The large area pulsed solar simulator provides an advantage for testing large solar panels quickly and at a fraction of the cost in money and time of a steady-state (continuous) solar simulator. To ensure that the solar simulator is meeting the expected performance characteristics, the SR-1901PT can be used to measure spectral match, uniformity and repeatability.



***The SR-1901PT is the ideal instrument for classifying pulsed solar simulators for spectral match, uniformity and repeatability.***

The instrument is compact, portable, and easy to set up and use. The SR-1901PT has a spectral range of 280-1900nm. Other features include:

- Detectors:
  One 512 element UV-enhanced silicon photodiode array and one 256 element TE-cooled extended InGaAs photodiode array
- 1-50 msec integration time (user adjustable)
- Bluetooth I/O connection
- External TTL port and phototrigger with SMA-905 port
- 0-100 millisecond trigger delay increment (user adjustable)
- External TTL≤5µsec trigger jitter
- Photodetector jitter - ≤100nsec
- Spectral match for AM0, AM1.5, AM1.5G (global tilt)
- DARWin SP-PT Data Acquisition software includes added features such as spectral match reports, auto-ranging, and automatically saves data as ASCII files for use with 3rd party software




***Spectral match of a pulsed solar simulator collected with a Spectral Evolution SR-1901PT spectroradiometer fitted with a right angle diffuser calibrated for irradiance. All our spectroradiometers include DARWin SP Data Acquisition software which has a built-in utility to generate spectral match reports per IEC Standard 60904-9/ASTM E927-05. Pictured is a spectral match using AM1.5 global tilt for the Spectrolab pulsed solar simulator. The DARWin spectral match utility can also perform spectral match to AM0 and AM1.5.***


26 Parkridge Road ◊ Suite 104
Haverhill, MA 01835 USA
Tel: 978 687-1833 ◊ Fax: 978 945-0372
Email: sales@spectralevolution.com
www.spectralevolution.com