Spi-Sun Simulator™

- **SPECTRAL**
- **SPATIAL**
- **TEMPORAL**

Automation options available to efficiently manage throughput

Short-and long-term spectral stability over the life of the tool

Extraordinary stability resulting in more than 100,000 module tests without a lamp change

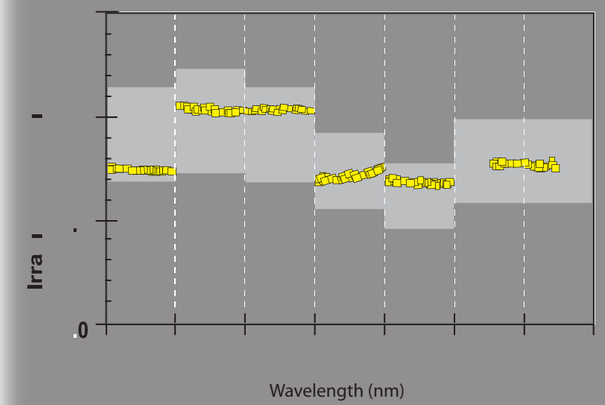
Spire measures 96 spatial points across the test plane to validate intensity and spectral spacial uniformity

Up to 3 user-selectable irradiance levels (200-1,100 mW/m²) in a single flash on SLP (single long-pulse) models

Every SLP flash lasts up to 80 ms resulting in:
- Up to 4,800 datapoints
- 3 I-V curves (compliant with IEC standard 60891 for series resistance measurement)

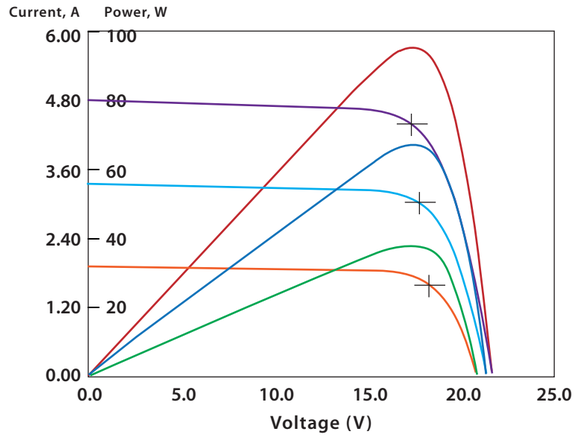
CLASS A SPECTRUM IN ALL LOCATIONS

Although Class A requires only one measurement point, Spire measures 96



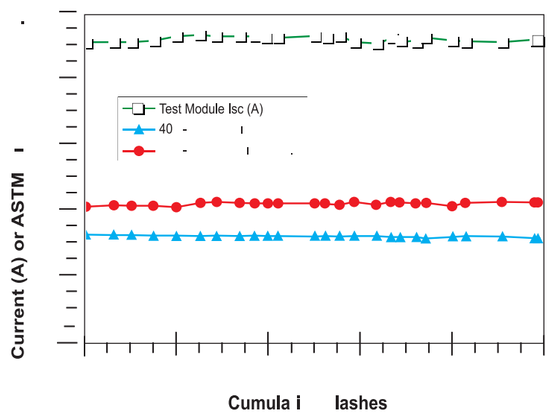
IEC - COMPLIANT R_S MEASUREMENT

Three-level R_S measurement performed in a single flash



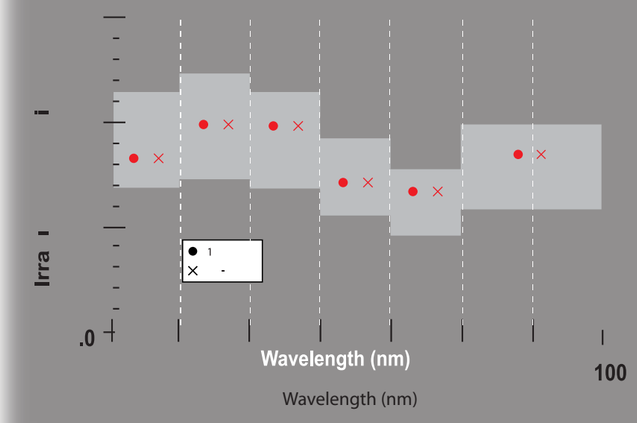
LONG-TERM SPECTRAL STABILITY

Simulator produces consistent testing results over at least 100,000 flashes



SHORT-TERM SPECTRAL STABILITY

Spectrum remains unchanged during flash



Simulator Models	Spi-Sun Simulator 4600	Spi-Sun Simulator 3500	Spi-Sun Simulator 4600SLP	Spi-Sun Simulator 3500SLP
Maximum Module Dimensions (mm)	2,000 x 1,370	1,620 x 1,020	2,000 x 1,370	1,620 x 1,020
Light Source				
Number of Lamps	2	1	2	1
Lamp Type	Multi-Pulse filtered xenon tube		Single Long Pulse filtered xenon tube	
Pulse Width	1ms		20 to 80 ms at 1,000 W/m^2	
Spectrum	+/-25%, AM1.5G (Class A)		+/-25%, AM1.5G (Class A)	
Irradiance Temporal Stability	+/-1% (Class A)		+/-0.2% (Class A)	
Irradiance Spatial Uniformity	+/-2% (Class A)		+/-2% (Class A)	
Lamp Life	> 10,000,000 flashes		> 100,000 flashes	
Measurement Range				
Range of Light Intensity	700-1,100 W/m^2		**Standard** 400-1,100 W/m^2; **Optional** 200-1,100 W/m^2	
Measurement Duration	30-45 seconds		< 1 second	
Power/Module (max)	500 W		600 W	
Voltage Ranges	3 ranges (2, 25, 150 V full-scale)		5 ranges (2.5, 10, 25, 100, 250 V full-scale)	
Current Ranges	3 ranges (0.2, 2, 20 A full-scale)		4 ranges (3, 6, 12, 25 A full-scale)	
I/V Resolution	0.003%		0.003%	
Throughput				
Peak Time (manual)	15 seconds		15 seconds	
Continuous Typical Minimum Cycle Time	45 seconds		30 seconds	
System Specifications (not including control cabinet)				
Length x Width x Height (mm)	2,980 x 2,010 x 910	2,290 x 1,980 x 910	2,980 x 2,010 x 910	2,290 x 1,980 x 910
Net Weight	1,230 kg (2,700 lbs)	955 kg (2,100 lbs)	1,230 kg (2,700 lbs)	955 kg (2,100 lbs)
Control Cabinet Specifications				
Length x Width x Height (mm)	1,549 x 432 x 1,194		1,549 x 432 x 1,194	
Net Weight	1,606 kg (730 lbs)		1,606 kg (730 lbs)	
Utility Requirements				
Electricity	220 V, +/-10%, 15 A, 50/60 Hz, 1 Ph		220 V, +/-10%, 20 A, 50/60 Hz, 1 Ph	
Compressed Air	550-700 kPa (80-100psi), 28 lpm (1 scfm)		550-700 kPa (80-100 psi), 28 lpm (1 scfm)	
Options				
Module QA Test System	High voltage isolation and ground continuity testing, automated load and unload of modules, optional automatic labeling of modules			
Length x Width x Height (mm)	2,010 x 7,140 x 2,590	1,980 x 6,550 x 2,590	2,010 x 7,140 x 2,590	1,980 x 6,550 x 2,590
Net Weight	1,910 kg (4,210 lbs)	1,635 kg (3,604 lbs)	1,910 kg (4,210 lbs)	1,635 kg (3,604 lbs)

All simulators are CE compliant