

SpectralLED® RS-9-1-SWIR Tunable Uniform Light Source



For the ultimate in resolution and accuracy, the SpectralLED® Tunable SWIR source incorporates 12 discrete wavelengths for synthesis of commercially available light sources or based on spectra that you import.

The platform is easily adaptable for automated test systems and production line integration, with integrated optical feedback and temperature control to ensure rock-solid stability and consistent results.

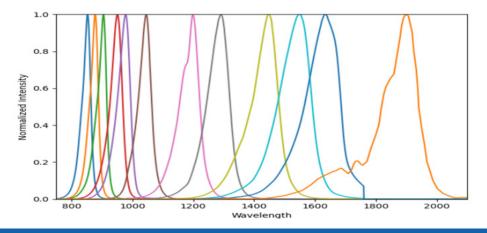
High Resolution, Stability, and Accuracy for Camera and Image Sensor Calibration

Key Features

- Constant current drivers & built-in optical feedback
- · Accurate and flicker-free output in real time
- All solid-state design for rapid start-up, repeatable performance
- ISO/IEC 17025 Accredited by NVLAP (NVLAP lab code 200823-0) for Calibration Accuracy

Application Areas

- Camera and image sensor calibration
- Photodiode detector responsivity characterization
- Spectrum/illuminant simulation
- Uniform light standard for medical application
- Technical and industrial photography



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Measurement Applications

- Calibration & Test of
 Night Vision Equipment
- Quantum Efficiency
- Spatial Non-uniformity
- Pixel Defects
- Vignetting Correction
- Sensitivity
- Responsivity
- Signal to noise
- Linearity
- Saturation Exposure
- Dynamic range

Gamma Scientific is ISO/IEC 17025 accredited by NVLAP (NVLAP lab code 200823-0).

	RS-9 SWIR Optical Specifications
Spectral Range	800 nm to 2000 nm SWIR
Spectral Output	12 discrete LED channels 850, 870, 910, 940, 980, 1050, 1200, 1300, 1450, 1550, 1650, 1900
Source Geometry	80 mm diameter sphere port opening, uniform radiant source
Translational Uniformity	≥ 95% for 65mm at center and tapers off towards edges
Output Radiance (Channel dependent)	Max850nm channel ~ 3500 μW/cm²/sr Min850nm channel ~ 0.4μW/cm²/sr
	Accuracy Specifications
Irradiance Stability	≥ 95% stable after 50ms rise time for single channels
Irradiance Accuracy	± 2% absolute accuracy to NIST standard
Spectral Accuracy	± 2.5 nm centroid wavelength for all discrete wavelengths
Color Accuracy	N/A
Temperature Stability	Within ± 1° C via active TEC
	General Specifications
Software	SpectralLED Pro GUI Control Program, or any serial port terminal tool
Interface Connectors	USB 2.0 type B and DB15 RS485 serial
Interface Protocol	Simple ASCII commands
Supported Operating Systems	Windows using FTDI COM port drivers
Input Voltage and Power	100 to 240 VAC at 50-60Hz, 400W maximum
Dimensions (H x W x L)	225mm (8.9in) x 225mm x 308mm (12in). Weight 7.4kg (16.2lbs)
Dimensions (H x W x L) Environmental Conditions	225mm (8.9in) x 225mm x 308mm (12in). Weight 7.4kg (16.2lbs) 15 − 35°C, ≤ 65 %RH
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Specifications are subject to change without notice.

