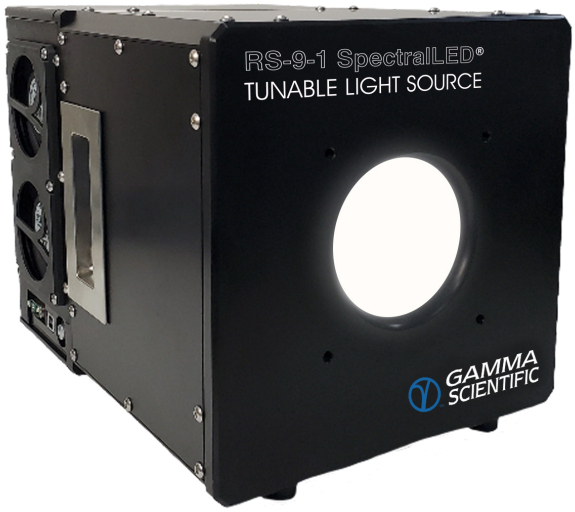
SpectralLED® RS-9-1-SWIR Tunable Uniform Light Source



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.

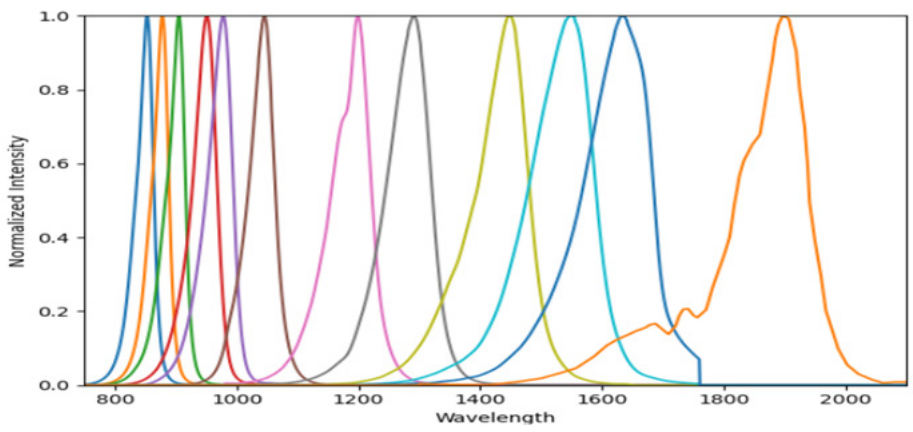
High Resolution, Stability, and Accuracy
for Camera and Image Sensor Calibration

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



contact@gamma-sci.com | +1.858.279.8034 | www.gamma-sci.com

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

GAMMA SCIENTIFIC

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)	
Environmental Conditions	15 – 35°C, ≤ 65 %RH	
General Specifications		
RS – 9 – SWIR – Wavmon™	Multi-channel photodiode system with amplitude feedback and real time wavelength measurement	
RS – 9 – SWIR - IRIS	Integrated IRIS w/ stepper motor control & additional API commands for easy adjustment	

Specifications are subject to change without notice.

Rev 05.21.25

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+1.858.279.8034 | 9925 Carroll Canyon Road, San Diego, CA 92131 | www.gamma-sci.com