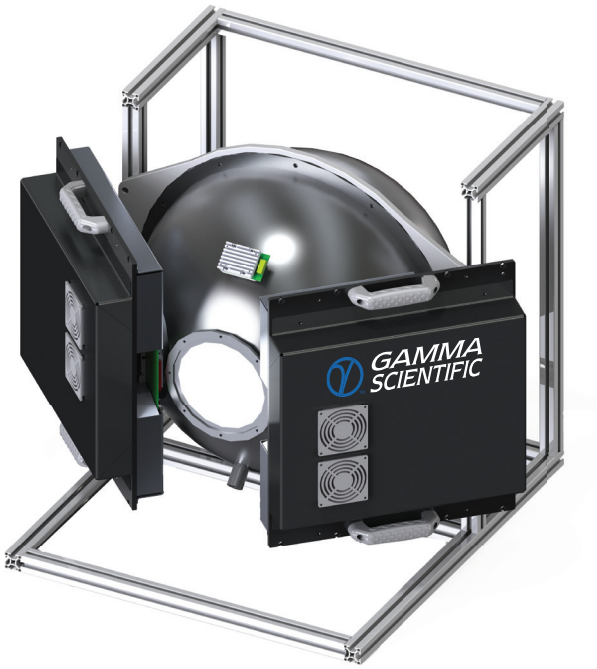
SpectralLED® RS-7-2 VIS SWIR Tunable Light Source



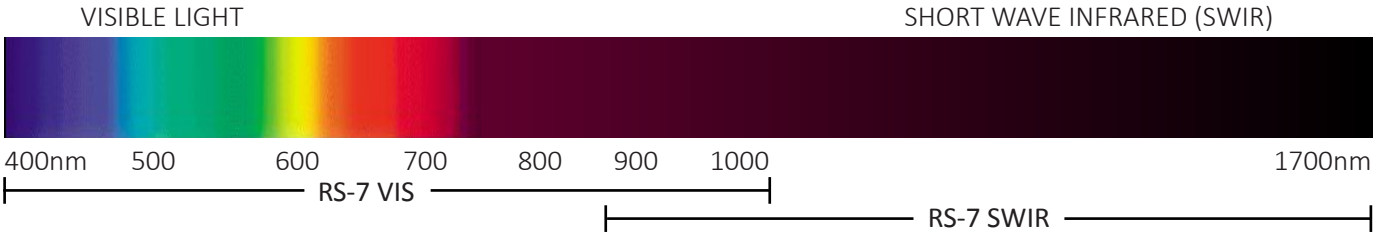
When you require a large area, highly uniform light source for camera and image sensor calibration, the SpectralLED® VIS SWIR Tunable Light Source delivers brightness, radiometric stability and wavelength accuracy that is unmatched in the industry.

The SpectralLED® Tunable Light Source incorporates up to 31 discrete visible wavelengths and 10 shortwave infrared 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.

Unprecedented Resolution and Accuracy

For Camera & Image Sensor Calibration

- Wavelength options from the UVA to the shortwave infrared
- Built-in RMS spectral fitting for simulation of user imported spectra
- Constant current drivers & built-in optical feedback ensure accurate & flicker-free output in real time
- All solid-state design for rapid start-up, repeatable performance and long operating lifetime
- ISO/IEC 17025 accredited by NVLAP (NVLAP lab code 200823-0) for calibration accuracy



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SpectralLED® RS-7-2 VIS SWIR Tunable Light Source

GAMMA SCIENTIFIC

Measurement Applications

- White Balance
- Quantum Efficiency
- Spatial Non-uniformity
- Pixel Defects
- Crosstalk
- Vignetting Correction
- Sensitivity
- Responsivity
- Signal to noise
- Linearity
- ISO Speed
- Saturation Exposure
- Dynamic range

Gamma Scientific is ISO/IEC 17025 accredited by NVLAP (NVLAP lab code 200823-0) and performs LM-79 / LM-80 LED testing.

General Specifications	
Source Geometry	150 mm diameter uniform output, Lambertian radiant source (Other output port sizes available on request)
Spatial Uniformity	≥ 98% over 8° field of view
Optical Geometry	Integrating sphere at 500 mm diameter (Other sphere sizes available on request)
Optical Specifications	
Spectral Range	380 nm to 1,700 nm (Custom ranges available on request)
Spectral Output	28 VIS discrete LED channels, 3 broadband LED channels, 10 SWIR LED channels Visible resolution ~ 15nm SWIR resolution ~ 50 nm (typical channel spacing)
Spectral Peaks	395nm, 405nm, 420nm, 430nm, 450nm, 460nm, 475nm, 495nm, 505nm, 520nm, 525nm, 535nm, 570nm, 595nm, 610nm, 620nm, 630nm, 637nm, 660nm, 675nm, 685nm, 700nm, 715nm, 730nm, 750nm, 760nm, 780nm, 805nm, 850nm, 895nm, 940nm, 965nm, 1050nm, 1200nm, 1300nm, 1450nm, 1550nm, 1650nm 2,700K Warm White, 3,000K Warm White, 6,500K Cool White (Custom configs available)
Spectral Bandwidth	Typical VIS of 20nm and NIR of 50nm FWHM Typical SWIR of 50-100nm FWHM (channel dependent)
Radiance Range	Typical maximum of 15,000 µW / cm^2 / sr Typical minimum of 15 µW / cm^2 / sr
Luminance Range	Typical maximum of 30,000 cd / m^2 (spectrum dependent) Typical minimum of 30 cd / m^2
CCT Range	1,900K to 40,000K
Preset Spectra	CIE illuminants A, B, C, D50, D55, D65, D75, E, F1-F12
Custom Preset Spectra	Configurable at time of order via API. Contact factory for details
Accuracy Specifications	
Illumination Stability	≥ 99.99% after 50 ms for radiance or after 2,000 ms for spectrum
Illumination Accuracy	± 1% (VIS) NIST traceable, 5% (SWIR)
Spectral Accuracy	± 1 nm (VIS), 2.5 nm (SWIR) centroid wavelength
Color Accuracy	CIE 1931 x,y ± 0.003 (VIS)
Linearity	< 0.1 % RMS of full scale

Specifications are subject to change without notice.

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