



GAMMA SCIENTIFIC Light Measurement Solutions

RS-50 Projection Light Source



Features

- **NIST-traceable**
- **Built-In timer showing elapsed time**
- **200-hour calibration/1 year**
- **Calibrate spectroradiometers, radiometers and photometers**
- **Calibrate detector responsivity**
- **Illuminate various materials**
- **Measure reflectance and transmittance**
- **Tungsten halogen lamp for stable output**
- **Calibration reports in units of luminous intensity, illuminance and irradiance**

Gamma Scientific's **RS-50 projection light source** is a precision source of radiant flux, used primarily to calibrate light measuring instrumentation and as stimuli to measure detection devices. These sources may be used as standards of irradiance or radiance, traceable to the National Institute of Standards Technology (NIST).

To maintain almost constant radiant flux output, tungsten halogen lamps are used exclusively. To power the sources, ultra-stable constant-current supplies utilize precision shunt current measurement and comparison circuits built into the source housing.

The RS-50 source is primarily used for generating irradiance levels at distances from 6 to 30 meters or for uniformly illuminating areas of up to 46 cm diameter or more.

The source itself uses a tungsten-halogen lamp, and the calibration of the source is given at a distance from the exit pupil. Beyond 6 meters the source has the characteristics of a point source and approximate illuminance and irradiance levels may be generated by using the inverse square law.

The RS-50 may also be used uncalibrated as a source to illuminate various materials. The correlated color temperature of the RS-50 source is set at CIE Illuminant A or 2856 20K. The area of illumination may be varied by changing the field aperture stop. Uses an RS-3 for power and monitoring.



About Gamma Scientific

Since 1961 Gamma Scientific has produced LED, display and light measurement test solutions for production and R&D environments. Gamma Scientific instruments are trusted by leading global organizations that require high-speed, precision measurements and custom configurations for the most challenging environments.

Gamma Scientific also operates a NVLAP accredited laboratory that performs ENERGY STAR® lighting certification and is ISO 17025 compliant. NVLAP Lab Code 200823-0

To view the complete line of test and measurement solutions from Gamma Scientific, visit www.Gamma-Sci.com.

Gamma Scientific

9925 Carroll Canyon Road
San Diego, CA 92131

858-279-8034

contact@gamma-sci.com

www.gamma-sci.com



GAMMA SCIENTIFIC Light Measurement Solutions

RS-50 Projection Light Source Specifications

RS-50 Projection Light Source	
Calibrated Wavelength Range	380-830 nm (300-1100 available upon request)
Nominal Output	Luminous Intensity 2700 cd Illuminance @15 m 12 Lux (1.1 fc) at 2856 ± 20K
Uniformity of Illuminated Area	±4% over 46 cm (18 in) diameter
Exit Pupil Size	25 mm with symmetrical distribution on the optical axis
Illuminated Area at 15 m (49.2 ft)	Standard 30 cm (12 in) diameter 46 cm (18 in) diameter <i>Blank apertures are available.</i>
Size:	Length: 267 mm (10.5 in) Height: 107 mm (4.2 in) Width: 102 mm (4.0 in) Weight: 1.9 kg (4.2 lb)

RS-3 Lamp Monitor and Control	
Regular Type	Constant Current
Measurement Technique	Poggendorf Comparison Method
Meter	Null Type (zero center)
Output Current	4A Maximum
Current Accuracy, Long Term	Better than .05%
Stability	Better than .02%
Temperature Drift	Less than ± .25% / 10°C
Temperature Range	15°C to 35°C
Humidity	10% - 85% non-condensing
Regulation	Less than ± .02% change for 10 Volt line change
Thermal drift After 8 Minute Warmup	Less than .01%
Current Ramp On/Off Time	Approximately 30 seconds
Power	90 Watts Maximum
Line Voltage	105/125 VAC and 210/250 VAC, 50-60 Hz
Size	Length: 368 mm (14.5 in) Width: 218 mm (8.6 in) Height: 152 mm (6 in) Weight: 5 kg (11 lbs)