

RS-14 LIGHT SOURCE SYSTEM

UNIFORM HALOGEN LIGHT SOURCE WITH WIDE ADJUSTABLE RANGE FOR RADIANCE AND COLOR TEMPERATURE



- The uniform light source system is ideal in applications where radiance uniformity is critical for device testing or calibration.
- Powered by a built-in constant current power supply, it delivers superior output stability.
- Radiance and luminance output can be manually adjusted across the whole range of the unit.
- The RS-14 Light Source is a compact system for ease of integration into a wide variety of applications.

FEATURES

- Wide spectrum range 300-2400 nm
- Illuminant A spectrum
- Wide adjustment range for CCT (2000-3000K) and output intensity over 6 decades (0.01-20,000 cd/m²)
- CCT adjustable in 1K increments using convenient touch screen display
- Calibrated detector
- Micrometer regulated aperture
- Digital timer to track lamp work time
- Shutter
- NIST-traceable Radiance/Irradiance calibration



APPLICATIONS

- Correcting Imaging Systems
- Flatness of Field
- Vignetting
- Evaluation/Calibration of Image Sensors
- Pixel Gain Uniformity
- Linearity
- Dynamic Range
- Calibration/Quality Control
- Detectors
- Photometers
- Spectroradiometers

SYSTEM COMPONENTS

- 6 inch Integrating Sphere
- 150W Halogen Lamp Assembly
- Manually Adjustable Lamp Attenuator
- Monitor Detector (Optional GS-1220 Spectroradiometer or S471 Optometer)
- Cooling Fan Power Supply
- NIST-traceable Radiance and Luminance Calibration

Gamma Scientific operates a NVLAP accredited laboratory that performs LM-79/LM-80 LED testing and is ISO 17025 compliant (NVLAP Lab Code 200823-0).

OPTICAL SPECIFICATIONS	
Spectral Range	300nm - 2400nm (Standard Calibration 360-1100nm)
Source Geometry	38mm Diameter Uniform Output, Lambertian Radiant Source
Spatial Uniformity	≥ 99%
Optical Geometry	Built-in Integrating Sphere, 6 inch Diameter (Other Output Geometries Available for Projection or Illuminator Applications)
Radiance Range	Typical Max. 112,700 μ W/cm ² /sr, Typical Min. 0.22 μ W/cm ² /sr (Spectrum Dependent)
Luminance Range	Typical Max. 20,000cd/m ² @ 3000K, Typical Min. 0.01cd/m ² (Spectrum Dependent)
Illuminance Range	300 lux @ 50 cm
CCT Range	2000K - 3000K
Variable Aperture	Micrometer Controlled
Sphere Coating	Barium Sulfate, PTFE per request
ACCURACY SPECIFICATIONS	
Luminance Stability @ 2856K	Short term \pm 0.5% Long Term \pm 2% @ 100h or 1 year
Luminance Accuracy @ 2856K	\pm 2.5% Absolute NIST Traceable, Calibration Stored Internally
Luminance Uncertainty @ 2856K	\pm 0.88%
CCT Accuracy	25K
Linearity	< 0.1% RMS of full scale
Temperature Stability	\pm 1 C°, Active Thermoelectric Cooler with Feedback
INTEGRATED CONTROLLER SYSTEM	
Luminance Display	FL, cd/m ²
Luminance Display Operating	Touchscreen
Luminance Display Range	0.001 to 90,000 cd/m ² (auto ranging)
Power Cycle	30 sec ramp function
Display CCT resolution	1K
Shutter	open/closed
Operating Temperature Range	15° to 30°C
Operating Humidity Range	10% to 65% (non-condensing)
Power	100/115/230 VAC, 50/60 Hz
Size	40 x 36 x 27 cm
Weight	5.9 kg