GAMMA SCIENTIFIC
Light Measurement Solutions

RS-10D Uniform Light Source

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Gamma Scientific's RS-10D uniform light source is a precision source of radiant flux, used primarily to calibrate light measuring instrumentation and as stimuli to measure detection devices.

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.

When used with its RS-70-X accessories, the RS-10D light source can be an absolute reference for producing standard outputs in luminance units of footlamberts, lamberts, candelas/m2, horizontal candlepower (candelas), and spectral radiance units of microwatts/cm2 *nm *steradian or illuminance units of lumens, footcandles, lumens/m2 (lux), and spectral irradiance units of microwatts/(cm2 * nm) or Watts/(m2 * nm) at a given distance.

FEATURES

- NIST-traceable
- 200-hour calibration/l year with built-in timer showing elapsed time
- Calibrates spectroradiometers, radiometers, photometers and detector responsivity
- Measures reflectance and transmittance
- Tungsten halogen lamps for stable output
- Calibration reports in units of luminance, radiance, illuminance and irradiance

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 LM-79/LM-80 LED testing and is ISO 17025 compliant. NVLAP Lab Code 200823-0.

To view the complete line of test and measurement solutions from Gamma Scientific, please visit our website at www.gamma-sci.com.

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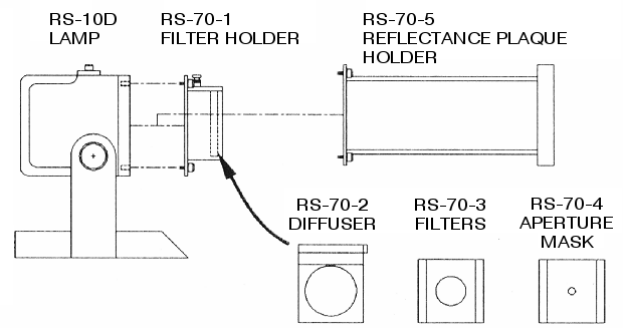
RS-10D Uniform Light Source Specifications



RS-10D Spectral Irradiance Head

Calibrated Wavelength Range @ Data Interval	300-1100 nm @ 5 nm
Calibration Interval	200 hr or 1 year
Output, Nominal Irradiance at 25 cm	$W/cm^2 \cdot nm$ 8.0×10^{-9} at 300 nm; 7.5×10^{-7} at 550 nm; 2.0×10^{-6} at 800 nm; 2.2×10^{-6} at 1100 nm
Output, Nominal Illuminance at 25 cm	592 lm/m^2 (LUX); 55 lm/ft^2 (fc)
Nominal Radiance with RS-70-2 Diffuser	W/cm2 · sr · nm 6.2×10^{-9} at 300 nm; 1.0×10^{-6} at 550 nm; 9.0×10^{-6} at 800 nm; 6.5×10^{-5} at 1100 nm
Nominal Luminance with RS-70-2 Diffuser	850 cd/m^2 (250 fL)
Correlated Color Temp.	2856 ± 20K Reported to ± 7K
Correlated Color Temp. with RS-70-2 Diffuser	2575 ± 50K Reported to ± 7K
Uniformity of Diffuser	± 3% over 25 mm
NIST Standards of Irradiance Output Uncer-tainty	± 2.5%
Uniformity of Exit Port	± 0.75%
Uniformity of Irradiance Plane Normal to Exit Port	± 2% over 50 mm diameter at 25 cm
Size	Height: 203 mm (8.0 in); Length: 197 mm (7.8 in) Width: 175 mm (6.9 in); Weight: 2.8 kg (6.25 lbs)
Regulator Type	Constant Current
Output Current	4A Maximum
Current Accuracy, Long Term	Better than .05%
Settability	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 for10 Volt line change
Thermal drift After 8 Minute Warmup	Less than .01%
Current Ramp On/Off Time	Approximately 30 seconds
Power	30 Watts Maximum
Line Voltage	100-240VAC, 50-60 Hz

*Standard Operating Range for Gamma Scientific Instruments- Temperature: Minimum: 0°C (32°F) - Maximum: 35°C (95°F); Relative Humidity (Non-Condensing): Minimum: 20% - Maximum 70%
**The information contained in this data sheet is based on Gamma Scientific's internal evaluation and is subject to change at any time without notice.
***Revised on April 14, 2015