

RS-10D Uniform Light Source



The RS-10D is a precision source of radiant flux, used primarily to calibrate light-measuring instrumentation and as stimuli to measure detection devices. To maintain constant output, tungsten halogen lamps are used exclusively in combination with ultra-stable constant-current supplies incorporating shunt current measurement and comparison circuits.

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, candela/m², horizontal candlepower (candela), 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.

Precision Calibration Solutions

Robust, Reliable and Traceable

Features

- NIST traceable
- Built-in timer shows elapsed time
- 200-hour calibration/one year
- Tungsten-halogen lamps for stable output
- Calibration reports in units of luminance, illuminance, radiance and irradiance

Applications

- Calibrate spectroradiometers, radiometers and photometers
- Calibrate detector responsivity
- Measure reflectance and transmittance

In addition to our exceptional technical and functional capabilities, Gamma Scientific is ISO/IEC 17025 accredited by NVLAP (NVLAP lab code 200823-0).

RS-10D Uniform Light Source	
Calibrated Wavelength Range @ Data Interval	300-1100 nm @ 5 nm
Calibration Interval	W/cm ² *nm 8.0 x 10 ⁻⁹ at 300 nm 7.5 x 10 ⁻⁷ at 550 nm 2.0 x 10 ⁻⁶ at 800 nm 2.2 x 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/cm ² *sr*nm 6.2 x 10 ⁻⁹ at 300 nm 1.0 x 10 ⁻⁶ at 550 nm 9.0 x 10 ⁻⁶ at 800 nm 6.5 x 10 ⁻⁵ at 1100 nm
Nominal Luminance with RS-70-2 Diffuser	850 cd/m ²
Correlated Color Temp. (CCT)	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 Uncertainty	±2.5%
Uniformity of Exit Port	±0.75%
Uniformity of Irradiance Plane Normal to Exit Port	±2% over 50 mm; diameter at 25cm
Size	197 mm (7.8 in) L x 175 mm (6.9 in) W x 203 mm (8.0 in) H 2.8 kg (6.25 lb)
Regulator Type	Constant current
Output Current	4A maximum
Current Accuracy, Long Term	Better than 0.5%
Set-ability	Better than 0.2%
Temperature Drift	Less than ±.25%/10°C
Temperature Range	15°C to 35°C
Humidity	10%-85% non-condensing
Regulation	Less than ±0.2% change for 10 Volt line change
Thermal drift After 8 Minute Warmup	Less than 0.1%
Current Ramp On/Off Time	Approximately 30 seconds
Power	100 to 240 VAC, 50/60 Hz 30 Watts Maximum

If *uncalibrated* output at approximately 2856K is acceptable for your application, please specify item number RS-10DU at time of order. Specifications are subject the change without notice.

Options:

