

Spectra-PT Power Tunable Spectral Calibration Sources

Simple uniform sources of luminance and radiance for high dynamic range test and calibration of imaging and non-imaging devices



Speed and accuracy in a simple design

Spectra-PT sources are designed for flat fielding and calibrating cameras and sensors for radiometric responses from low to high light levels. Spectra-PT yields high fidelity measurements while keeping the user experience simple and affordable with turnkey features and excellent dynamic range. A great all-around uniform source system for simple camera and sensor testing.

Spectralon®, a highly diffuse material inside the sphere, provides stable reflectance and repeatability over the lifetime of the system. The integrating sphere and control electronics are housed in a single enclosure for easy portability, and production ready features such as automation, and easy-to-use software interface with user defined and selectable light levels.

A 13.5 cm integrating sphere with a 5 cm exit port, precision automated variable attenuator, and built in photopic response photodetector allows for continuous adjustability and good dynamic range up to 50,000 cd/m².

The automated VA allows the user to quickly and accurately drive to a preset or selected luminance value. For cameras with wide angle FOV's, Spectra-PT features our WAF (Wide Angle Field Of View) version. Each system comes with a uniformity mapping and National Institute of Standards and Technology (NIST) traceable spectral radiance and luminance calibrations.

Types of test

- Luminance Responsivity
- Image Validation and Correction
- Uniformity
- Flat Fielding

Ideal for calibrating

- CCD and CMOS cameras
- Small area remote sensing devices
- Electronic imaging devices
- Medical endoscopes
- Ambient light sensors
- Security cameras

Specifications and Ordering Information

Model Number:
Order Number:

PT-1000-S
AA-01578-001

PT-1000-W
AA-01578-000

System Performance

Correlated Color Temperature: CCT 2856K \pm 75K
 Est. Luminance Range: cd/m² 0 to 50,000
 Est. Equivalent Illuminance at Port: lux 0 to 150,000
 Est. Peak Spectral Radiance: μ W/cm²-sr-nm @1050 nm 180
 Uniformity: 94%
 Lamp Lifetime: hrs > 500
 Luminance Attenuator Steps: 1.20E+04
 Dynamic Range/Bits/dB - Full Range of System: 4.85E+04/15/93

2800K \pm 100K
 0 to 50,000
 0 to 150,000
 180
 94% over 180° FOV
 > 500
 1.20E+04
 4.85E+04/15/93

System Components

Sphere Diameter: (ID) 13.5 cm
 Exit Port Diameter: 5 cm
 Sphere Coating: Spectralon®
 Inline Baffle: 7.62 cm
 Monitor Detector: SD-S1, Silicon
 Light Source: Quartz Halogen
 Detector Response: Photopic & Unfiltered
 System Software: LSS-PT

13.5 cm
 5 cm Dome
 Spectralon®
 N/A
 SD-S1, Silicon
 Quartz Halogen
 Photopic & Unfiltered
 LSS-PT

Port Accessories

Standard Aperture Sizes: 1.27, 2.54, 3.81 and 5.05 cm

System Specifications

Communication: USB 3.0
 Operating System: Windows 10
 Dimensions: (L x W x H) 39 cm x 32 cm x 30 cm
 Weight: (approximate) 14 kg

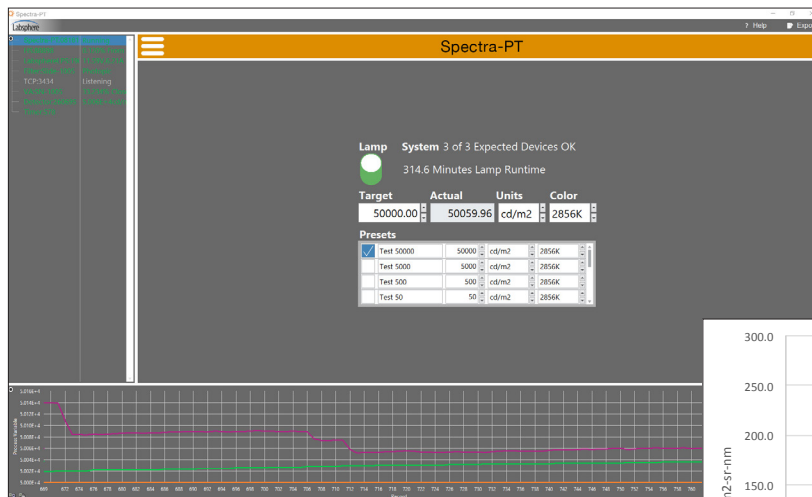
USB 3.0
 Windows 10
 39 cm x 32 cm x 30 cm
 14 kg

Included Calibrations (NIST traceable)

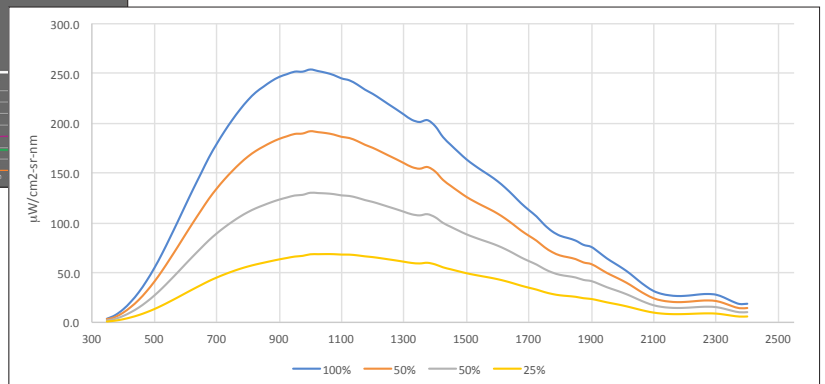
Luminance*: cd/m²
 Correlated Color Temp: (factory set) 2856K
 Spectral Radiance: (350 - 2400 nm) at max luminance
 Spatial Uniformity: at max luminance

cd/m²
 2800K
 at max luminance
 at max luminance

*Additional calibrations may be entered by user



Spectra-PT Main Window



Example: PT-1000-S Spectral Radiance at 2856K



Advancing the Technology of Light: Measure. Create. Reflect.

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PB-14088-000 Rev 13