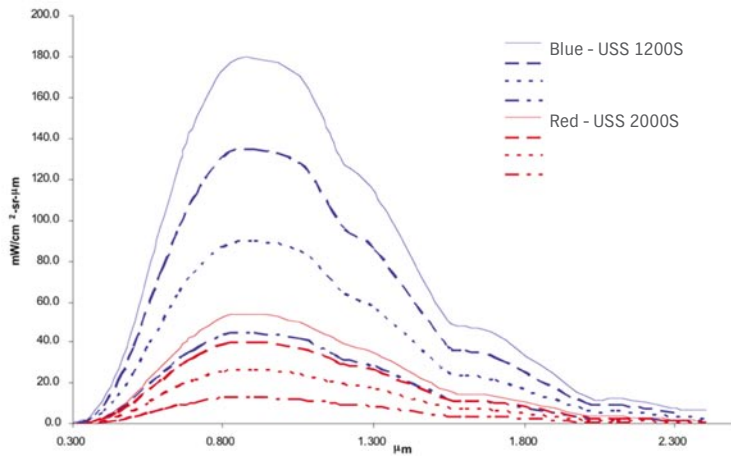


MEDIUM USS UNIFORM SOURCE SYSTEMS

Exceptional uniform radiance for the testing and calibration of imaging and planer detectors

SPECTRAL RADIANCE PLOT



ACCURATE

The Medium Uniform Source Systems are designed to provide exceptional uniform spectral radiance for the test and calibration of imaging and non-imaging detectors. The systems provide stepped luminance output, or continuous output. The USS-1200 produces zero to 40,000 cd/m² and the USS-2000 produces zero to 18,000 cd/m². Each system monitors luminance levels in both cd/m² and foot-lamberts and all calibrations are traceable to the National Institute of Standards and Technology (NIST).

Integrating sphere diameters of 12 or 20-inches are coated with Spectrafect® which combines a 98% reflective surface with nearly perfect Lambertian properties. Highly stable over time, this coating ensures the consistent integration of light over the lifetime of your sphere.

FEATURES:

- Stepped or Continuous Radiance Variability
- Better than 98% Radiance Uniformity
- Spectrafect® Interior
- Interchangeable Components
- Calibration Reports
- NIST Traceable Luminance Calibration
- Control Software
- Backed by ISO 9001:2000 Registered Quality Management System

BEST FOR CALIBRATING:

- Electronic Imaging Cameras
- Planar Arrays
- Photometers
- Spectroradiometers
- Displays

FLEXIBLE DESIGN

Four ports enable the system's radiance levels to be easily modified with the addition or removal of light sources. The system's exit port can be capped when not in use or reduced in size with optimal Spectrafect coated accessories. The sphere comes with an extra detector port for expanded radiance monitoring and the electronics rack has room for additional motor controllers, power supplies, or a detector multiplexer.

EASY-TO-USE

The systems ramp to full power in 20 seconds. Matching lamp color temperatures ensure color shifts are eliminated with different lamp combinations. Robust port frames allow for easy, repeatable mounting of device accessories. The systems offer rack mounted electronics for quick set-up and mobility for bench-top use.



USS-2000C

Specifications

Description and Model

Stepped Uniform Source System (USS-S)
Continuous Uniform Source System (USS-C)

USS-1200
AS-02448-201
AS-02448-301

USS-2000
AS-02444-201
AS-02444-301

System Includes

Uniform Source Sphere, US-120-SF or US-200-SF
Internal Halogen Lamp Assemblies*, IHLS-100-035
Preset Power Supply*, LPS-100-0307
External Halogen Lamp Assemblies*, EHLS-100-100R
Preset Power Supplies*, LPS-100-0833
Photopic Detector, SDA-050-P-RTA-CX
Variable Attenuator (C Series), VA-100-SC
Motor Controller* (C Series), MC-1000
Radiometer/Photometer*, SC 6000

USS-1200
AS-02448-000
AS-02631-035
AS-02600-307
AS-02630-100
AS-02600-833
AS-02522-401
AS-02450-100
AS-02702-000
AS-01636-100

USS-2000
AS-02444-000
AS-02631-035
AS-02600-307
AS-02630-100
AS-02600-833
AS-02522-401
AS-02450-100
AS-02702-000
AS-01636-100

*Product sheet available for additional information

System Properties and Performance

Technical Specification Differences

| | USS-1200S | USS-1200C | USS-2000S | USS-2000C |
|---|--|--|--|--|
| Luminance Range (x1,000 cd/m ²) | 10, 20, 30, 40 | 0 - 40 | 4.6, 9.2, 13.8, 18 | 0 - 18 |
| Peak Radiance (mW/cm ² -sr-µm at 0.9 µm) | 98.5 | 98.5 | 55 | 55 |
| Color temperature | 3000K | 3000K | 3000K | 3000K |
| System Configuration | USS-1200S | USS-1200C | USS-2000S | USS-2000C |
| Sphere Diameter | 12 in (30 cm) | 12 in (30 cm) | 20 in (50 cm) | 20 in (50 cm) |
| Exit Port | 4 in (10 cm) | 4 in (10 cm) | 8 in (20 cm) | 8 in (20 cm) |
| Lamp Assembly* Power | Qty 4, 35 W | Qty 3, 35 W Qty 1, 100 W | Qty 4, 35 W | Qty 3, 35 W Qty 1, 100 W |
| Power Supplies | Qty 4, for 35 W lamps | Qty 3, for 35 W lamps Qty 1, for 100 W lamp | Qty 4, for 35 W lamps | Qty 3, for 35 W lamps Qty 1, for 100 W lamp |
| Current Stability | 3.07 A +/- 0.1% | 3.07 A +/- 0.1% 8.33 A +/- 0.1% | 3.07 A +/- 0.1% | 3.07 A +/- 0.1% 8.33 A +/- 0.1% |
| System Dimensions | | | | |
| Sphere Dimension (W x D x H) | 17.1 x 11.3 x 19.7 in (43.4 x 28.7 x 50.0 cm) | 17.1 x 11.3 x 19.7 in (43.4 x 28.7 x 50.0 cm) | 24 x 18.5 x 23.8 in (61 x 47 x 60 cm) | 24 x 18.5 x 23.8 in (61 x 47 x 60 cm) |
| Rack Dimension (W x D x H) | 19.7 x 21.7 x 21.9 in (50 x 55 x 56 cm) | 19.7 x 21.7 x 21.9 in (50 x 55 x 56 cm) | 19.7 x 21.7 x 21.9 in (50 x 55 x 56 cm) | 19.7 x 21.7 x 21.9 in (50 x 55 x 56 cm) |

For all systems

Integrating Sphere
Sphere Coating
Sphere Coating Reflectance
Luminance Uniformity*
* Applies at maximum radiance, uniformity may vary at lower radiance levels.

Uniform Source Integrating Sphere
Spectrafect®
98%
>98%

Detector

Active Area
Range
f1'
Connector

VI Filter Silicon Photodiode
5.7 mm²
Visible
4%
BNC

Radiometer/Photometer

Power Requirements
Current Dynamic Range
Voltage Dynamic Range
Computer Interface

SC 6000
110./220 VAC, 50/60 Hz
1 pA – 1 mA
10 mVdc – 50 Vdc-
Ethernet

Lamp Power Supply

Power Requirements
Current Rise Time
Compliance

LPS-100
110./220 VAC, 50/60 Hz
20 s
CE

Optional Accessories/Calibrations

Internal & External Light Source Assemblies
Power Supplies
Spectral Radiance Calibration
Radiance Calibration
Exit Port Luminance Uniformity Mapping
Illuminance Calibration
Custom Spectral Radiance Calibrations

IHLS (internal)/EHLS (external)
LPS
USC-SR (300-2400 nm)
SCC-RA
USC-PM
SCC-IL
Optional

Recommended Computer Requirements

Operating System
Drives

Windows 98® 2nd Edition, Windows 2000® PE or later
3 1/2" Disk Drive or 1 CD-ROM Drive