

USS-800C Continuous Uniform Source Systems

Exceptional uniform radiance for the test and calibration of imaging and non-imaging devices



Accurate

Labsphere's USS-800C Systems feature an 8 inch diameter integrating sphere with a 2 inch exit port suitable for portable imaging systems and arrays. The sphere interior is coated with highly reflective Spectrafect® that provides a better than 98% uniformity through the radiance port. Both durable and highly stable over time, Spectrafect coating ensures the consistent integration of light over the lifetime of your sphere.

The USS-800C Systems provide continuous luminance output variability from zero to 9800 or 38700 cd/m², depending on the model. A built-in photopic response photodetector continuously monitors the source luminance. Each system provides National Institute of Standards and Technology (NIST) traceable calibration.

Flexible design

The USS-800C Systems yield high returns on investment by facilitating system modifications, upgrades and enhancements. A wide choice of light sources allow users to swap lamps in order to choose the appropriate configuration to meet their radiance performance needs. Optional Spectrafect coated port accessories allow users to reduce the port size of their sphere to match their applications.

Features and reporting

- Continuous radiance variability from 0 to 9800 or 38700 cd/m²
- Spectrafect interior provides >98% radiance uniformity
- Radiometric and photometric calibration reports
- NIST traceable luminance calibration
- Backed by an ISO 9000:2001 registered quality management system

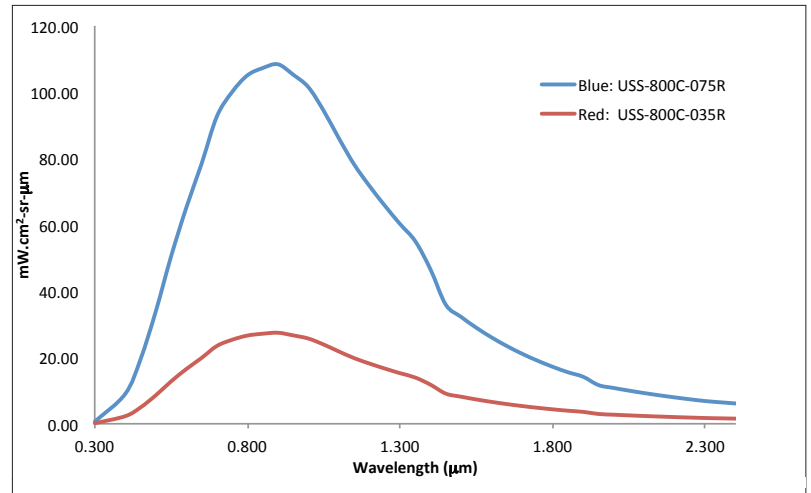
Applications

- Ideal for calibrating:
 - Imaging radiometers
 - Telespectroradiometers
 - Small-area remote sensing devices
 - Cameras
 - Displays

Easy to use

A durable port framed exit port allows for the repetitious mounting of devices under test. USS-800 systems are operated through a control chassis featuring a regulated DC constant current power supply and an SC 6000 radiometer/controller that provides accurate monitoring and control of the exit port luminance. Digital readout of the source output is displayed on an LCD display located on the front panel of the SC 6000. Ethernet ports are included for optional computer interface.

Typical Radiance



Ordering Information

Model and Description

USS-800C 8 inch Continuous Uniform Source System

Systems Include:

8 inch Uniform Source Sphere, USS-800-SF
External Halogen Lamp Supply, EHLS-100-35R, 75R
Preset Power Supply, LPS-100-0307, 0625
Photopic Detector, SDA-050-P-RTA-CX
Variable Attenuator, VA-100-MIC
Radiometer/Photometer, SC 6000
Luminance Calibration, SCC-LU

USS-800C-035R

AS-02711-100

AS-02465-000
AS-02630-035
AS-02600-307
AS-02522-301
AS-02455-000
AS-02702-000
SCC-LU

USS-800C-075R

AS-02711-200

AS-02465-000
AS-02630-075
AS-02600-625
AS-02522-301
AS-02455-000
AS-02702-000
SCC-LU

System Properties and Performance

System Specifications

	USS-800C-035R	USS-800C-075R
Sphere Diameter:	8 in (20 cm)	8 in (20 cm)
Exit Port Diameter:	2 in (5 cm)	2 in (5 cm)
Sphere Coating Reflectance:	98%	98%
Luminance Range: (cd/m ²)	0 - 9800	0 - 38700
Luminance Range: (ft-L)	0 - 2800	0 - 11300
Illuminance Range: (lux)	0 - 30000	0 - 121600
Peak Radiance: (mW/cm ² -sr-μm at 0.9 μm)	27	108
Luminance Uniformity:*	>98%	>98%

* Applies at maximum radiance, uniformity may vary at lower radiance levels.

Detector

	Vλ Filter Silicon Photodiode
Active Area:	5.7 mm ²
Range:	Visible
f1':	4%
Connector:	BNC

Radiometer/Photometer

	SC 6000	SC 6000
Power Requirements:	110./220 VAC, 50/60 Hz	110./220 VAC, 50/60 Hz
Current Dynamic Range:	1 pA – 1 mA	1 pA – 1 mA
Voltage Dynamic Range:	10 mVdc – 50 Vdc-	10 mVdc – 50 Vdc-
Computer Interface:	Ethernet	Ethernet

Lamp Assemblies

	EHLS-100-035R	EHLS-100-075R
Power:	Qty 1, 35 W	Qty 1, 75 W
Reflector:	Rhodium	Rhodium
Color Temperature:	3000K	3000K

Power Supplies

	LPS-100-0307	LPS-100-0625
Power Requirements:	110./220 VAC, 50/60 Hz	110./220 VAC, 50/60 Hz
Current Stability:	3.07 A +/- 0.1%	6.25 A +/- 0.1%
Current Rise Time:	20 s	20 s
Weight:	6.5 lbs (2.9 kg)	6.5 lbs (2.9 kg)
Dimension: (W x D x H)	8.3 x 10.5 x 3.5 in (21.1x 26.7 x 8.9 cm)	8.3 x 10.5 x 3.5 in (21.1x 26.7 x 8.9 cm)
Compliance:	CE	CE

Software Option

	MTRX-USS
Operating System:	Windows 7 and XP or later (32 bit or 64 bit)
Drives:	CD-ROM Drive
Ports:	TCP/IP

For other calibration options, use the part numbers below:

USS-800C-035R-PM	AA-01123-001	Includes USC-PM Luminance Mapping of Exit Port
USS-800C-035R-SR	AA-01123-000	Includes USC-SR Spectral Radiance Calibration
USS-800C-035R-SRPM	AA-01123-002	Includes USC-SR Spectral Radiance Calibration and Luminance Mapping
USS-800C-075R-PM	AA-01124-001	Includes USC-PM Luminance Mapping of Exit Port
USS-800C-075R-SR	AA-01124-000	Includes USC-SR Spectral Radiance Calibration
USS-800C-075R-SRPM	AA-01124-002	Includes USC-SR Spectral Radiance Calibration and Luminance Mapping