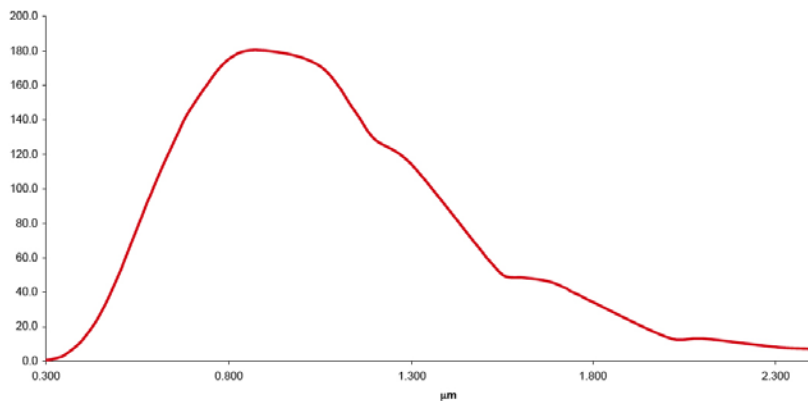# USS-1200V-LL "STARLIGHT" UNIFORM SOURCE SYSTEM

Provides irradiance levels comparable to those of an m=0 star in the UV, VIS, and IR.

TYPICAL SPECTRAL IRRADIANCE

ACCURATE

The USS-1200V-LL Uniform Source System is specifically designed to provide spectral irradiance levels comparable to those of an m=0 star in the UV, VIS, and IR. Irradiance is variable over more than eight decades. Uniformity is greater than 98%. The system is calibrated to display irradiance in phot/(s·cm^2) in each of seven spectral bands.

FEATURES:

Simulate stellar radiance

Variable radiance levels

Uniformity <98%

12 inch integrating sphere

4 inch diameter exit port

Dual-band monitoring

Source filter wheel

Calibration
- Irradiance responsivity
- Spectral radiance and irrandiance

APPLICATIONS:

Calibrate and test UV/VIS/NIR sensors

PRACTICAL

The USS-1200V-LL includes a satellite sphere illuminator with an external halogen light source and a motorized variable attenuator to provide precise control of illumination levels. Light from the satellite sphere enters the main sphere by passing through a two-part filter system: A bandpass filter-wheel permits selection of a specific spectral channels, while neutral-density filters determine the system's irradiance range.

Two different detectors are installed to monitor the irradiance at the system's exit port. The SC 6000 System Controller includes a radiometer, which can process signals from either detector and also serves as the communication hub between the power supply, and optional detector multiplexer. The SC 6000 offers both an IEEE-488 bus and an RS-232 serial port for computer control of the system.

EASY-TO-USE

The USS-1200V-LL can be operated either directly, from the front-panel controls, or through Labsphere's standard USS software, which permits remote control of the lamp power supply, variable attenuator, and optional detector multiplexer. The software automatically corrects detector readings using programmable calibration factors, and corrected readings are displayed in graphic and numeric format.

USS-1200V-LL SPHERE

Labsphere
A HALMA COMPANY
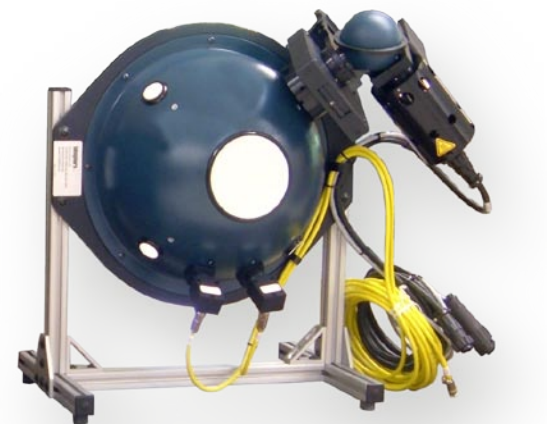
Specifications

Description and Model	USS-1200V-LL
12 Inch Low Level Light Uniform Source System	AA-00785-000

System Includes	USS-1200V-LL
12 Inch Spectraflect Uniform Source Sphere, US-120-SF	AS-02448-000
Two Radiometer/Photometers, SC 6000	AS-02702-000
75 Watt Rhodium External Light Source, EHLS-100-75R	AS-02247-075
Lamp Power Supply, LPS-100-0625	AS-02600-625
Unfiltered Silicon Detector Assembly, SDA-050-U-RTA-CX	AS-02522-400
InGaAs Detector Assembly, IDA-050-RTA-CX	AS-02522-400
1" Apeture Automated Variable Attenuator, VA-100-SC	AS-02450-100
2" Neutral Density Filter Sets, NDFS-200	AS-00148-600
Motor Controller, MC-1000	AS-02609-000

System Properties and Performance

System Specifications	US-120-SF
Sphere Diameter	12 in (30 cm)
Exit Port	4 in (10 cm)
Irradiance Uniformity*	>98%
Dynamic Range	
at 0.400 µm:	10^8 - 10^{14} phot/(s·cm²· µm)
at 2.300 µm:	10^5 - 10^{11} phot/(s·cm²· µm)
Narrowband filter wavelength	400, 500, 600, 700, 800, 900, 1100 nm
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)
Rack Dimension (W x D x H)	19.7 x 21.7 x 21.9 in
	(50 x 55 x 56 cm)

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

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

Power Supply	LPS-100-0625
Power Requirements	110./220 VAC, 50/60 Hz
Current Stability	0.01%
Current Rise Time	20 s
Regulated Current	2.60 A +/- 0.1%
Weight	6.5 lbs (2.9 kg)
Dimension (W x D x H)	8.3 x 10.5 x 3.5 in
	(21.1 x 26.7 x 8.9 cm)
Compliance	CE

Optional Accessories	
Replacement Lamp, 75W	OC-03125-000

Computer Requirements	
Operating System	Windows 2000® PE or Windows XP®
Drives	3 1/2 Disk Drive, or CD-ROM

Labsphere
A HALMA COMPANY