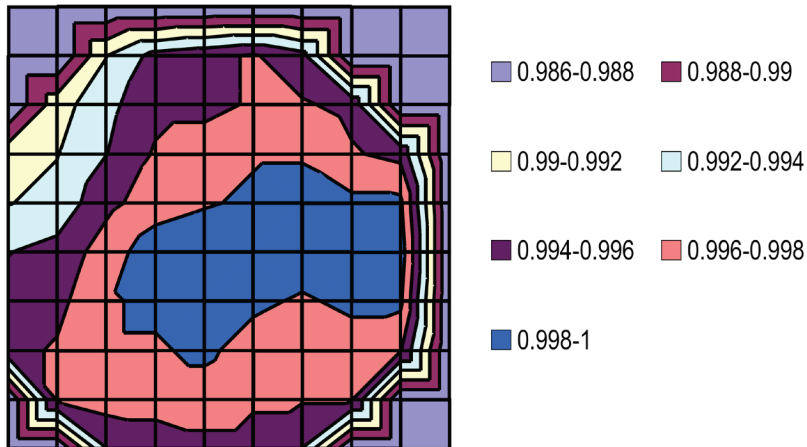


# UNIFORM SOURCE SPHERES

## Uniform Radiance Spheres for the Test and Calibration of Imaging and Non-imaging Devices

### TYPICAL LUMINANCE UNIFORMITY MAPPING



### APPLICATIONS

- Calibration and Testing of Detectors
- Calibration and Testing of Electronic Imaging Devices
- Calibration and Testing of CCD Cameras
- Calibration of Photometers and Radiometers
- Illumination for Densitometry
- Illumination of Resolution Targets
- MTF Testing of Optical Systems
- Transmittance Measurements of Fiber-optics

### FLEXIBLE DESIGN

Labsphere Uniform Source Spheres and Systems are the industry choice for calibration and test of cameras and sensors ranging from optical detectors, and focal plane arrays to multi spectral remote sensing systems.

Each uniform source integrating sphere is designed to accommodate a range of light sources and lamp power supplies offered by Labsphere.

Uniform source integrating spheres include a series of five sphere designs ranging from 6 to 20 inches in diameter. The integrating sphere interiors are coated with Labsphere's highly reflective and durable Spectrafect® coating and the mounting frame enables sphere height adjustment and rotation for the US-120 and the US-200 to position the exit port aperture in a vertical or horizontal plane.

Each sphere is designed to integrate with Labsphere's photopic and unfiltered detectors and our extensive line of internal and externally mounted light source assemblies. For instance to create a continuous variable uniform radiance source, simply add a Labsphere variable attenuator between the sphere and the external source.

Labsphere's knowledgeable applications engineering staff will work with you to design the best solution to fit your sensor calibration needs.



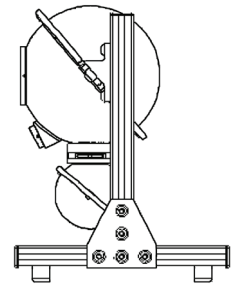
US-120-SF

## SPECIFICATIONS

Model Number	US-060-SF	US-080-SF	US-120-SF	US-200-SF
Sphere Diameter:	6 inches	8 inches	12 inches	20 inches
Output Port Diameter:	2 inches	2 inches	4 inches	8 inches
Sphere Material/Coating:	Spectrafect	Spectrafect	Spectrafect	Spectrafect
Sphere Mounting:	Adjustable vertical/horizontal	1/4-20 boss N/A	Adjustable vertical/horizontal	Adjustable vertical/horizontal
Frame Mount:	Bench top	N/A	Bench top	Bench top
Weight:	5 lbs (3 kg)	5 lbs (3 kg)	15 lbs (7 kg)	50 lbs (23 kg)
Order Number:	AS-02451-100	AS-02465-000	AS-02448-000	AS-02444-000

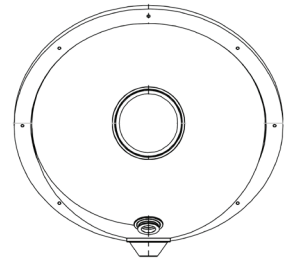
### US-060-SF

The US-60-SF is a 6 inch diameter integrating sphere that provides exceptional uniform luminance over the 2 inch diameter of the sphere exit port. The sphere is coated with Spectrafect® coating. A smaller 3 inch diameter satellite sphere (coated with Spectrafect) is fixed to the US-060-SF, thus providing a source of light into the larger 6 inch sphere. An iris diaphragm between the two spheres controls the size of the aperture and the amount of light entering the larger sphere. The satellite sphere has a 1 inch diameter lamp port which accepts the standard internal light sources. To prevent direct illumination from the lamp into the wall of the larger sphere, a diffuser has been placed between the two spheres. The mounting frame of the US-060-SF allows for sphere height adjustment.



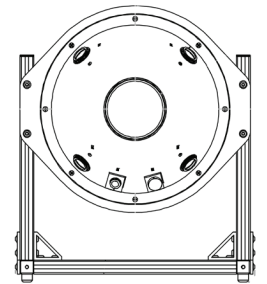
### US-080-SF

The US-080-SF is an 8 inch diameter integrating sphere with an in line baffle to provide uniform luminance through the 2 inch port framed exit port. The sphere is coated with Spectrafect coating. A 1 inch port framed entrance provides a mounting for Labsphere internal and external light source assemblies. To vary the radiant flux entering the sphere simply add one of Labsphere's variable light attenuators between the light source and the sphere. Need a specific uniform spectrum? Simply add one of Labsphere's filter holders between the sphere and external light source and filter the light entering the sphere to address your application. The 0.5 inch port framed detector port is designed to receive Labsphere photopic and unfiltered UV-VIS-NIR detectors.



### US-120-SF

The US-120-SF is a 12 inch diameter integrating sphere that provides exceptional uniform luminance over the full 4 inch diameter of the exit port. The sphere interior is coated with Spectrafect coating. Four 1 inch diameter lamp ports are equally spaced around the exit port; the lamp ports are baffled to prevent direct radiation from reaching the exit port from each individual lamp. An additional 0.50 inch port is provided adjacent to the exit port to accommodate a luminance monitor. A port plug is included for when the port is not in use. The mounting frame supplied with the US-120-SF allows for sphere height adjustment while allowing sphere rotation to position the exit port aperture in a vertical or horizontal plane.



### US-200-SF

The US-200-SF is a 20 inch diameter integrating sphere that provides exceptional uniform luminance over the full 8 inch diameter of the sphere exit port. The sphere interior is coated with Spectrafect coating. An additional 0.50 port is provided adjacent to the exit port to accommodate a luminance monitor. A port plug is included for when the port is not in use. The mounting frame supplied with the US-200-SF allows for sphere height adjustment while allowing sphere rotation to position the exit port aperture in a vertical or horizontal position.

