

Sampling Accessories

Integrating Spheres

ISP-I Integrating Spheres

Our ISP-I Integrating Spheres are convenient sampling optics that couple to our spectrometers and optical fibers to measure spectral output of LEDs, lasers and other light sources from 200-1100 nm.

Each fiber optic integrating sphere consists of a proprietary PTFE-based, sintered diffusing material in diameters of 30, 50 or 80 mm. This provides a Lambertian surface with >98% reflectivity in the visible range for irradiance measurements. Sample port sizes of 6 mm for the 30 mm sphere and 8 mm for the 50 mm and 80 mm spheres are available.



Available Items

Item Code	Description	Sample Port
ISP-30-6-I	Integrating sphere, 59 mm diameter, 58 mm high	6 mm
ISP-50-8-I	Integrating sphere, 80 mm diameter, 78 mm high	8 mm
ISP-80-8-I	Integrating sphere, 107 mm diameter, 117 mm high	8 mm
ISP-LED-ADP	Holds in place 3, 5 or 8 mm LED for reproducibility; for use with ISP-50-8-1	N/A
ISP-50-I-USB	ISP-50-8-I with connector for directly attaching to a spectrometer	8 mm
ISP-PORT-1	Custom sample port machining of 8, 10, or 12 mm diameter	8, 10 or 12 mm
ISP-PORT-2	Custom sample port machining of 14, 16 or 20 mm diameter	14, 16 or 20 mm

Specifications	
Dimensions:	ISP-30-6-I: 59 mm diameter, 58 mm height ISP-50-8-I: 80 mm diameter, 78 mm height ISP-80-8-I: 107 mm diameter, 117 mm height
Weight:	330 g (ISP-30); 730 g (ISP-50); 1,650 g (ISP-80)
Spectral range:	200-2500 nm
Sphere diameter:	30 mm, 50 mm or 80 mm
Sample port diameter:	6 mm (ISP-30); 8 mm (ISP-50 and ISP-80)
Sphere coating:	Proprietary PTFE-based diffusing material
Reflectivity:	>98% (400-1500 nm); >95% (250-2500 nm)
LED adapter:	For 3-mm, 5-mm or 8-mm LEDs

FOIS-1 Fiber Optic Integrating Sphere

The FOIS-1 is a compact sampling optic that collects light from emission sources such as LEDs and lasers and can be used to measure light fields with a 360° field of view.

The compact FOIS-1 measures just 56.8 mm x 62.4 mm x 38.1 mm and weighs only 240 g – yet it is durable enough for use for many types of applications. The interior of the FOIS-1 is made from Spectralon, a white diffusing material that provides a highly Lambertian reflecting surface.

The FOIS-1 is easy to operate. The user simply connects an optical fiber (the read fiber) from the FOIS-1's SMA 905-terminated output port to the SMA termination of the spectrometer. The emission source is then inserted into the 0.375" input port of the FOIS-1. Or the setup can be configured so that the light energy from the emission source can enter the input port.

Specifications	
Spectral range:	200-2500 nm
Dimensions:	56.8 mm x 62.4 mm x 38.1 mm
Weight:	240 g
Sample port aperture:	9.5 mm
Sphere coating:	Spectralon
Top cap mounts:	(2) 6-32 threaded holes (2) 8-32 threaded holes (1) 1/4"-20 threaded hole in center
Side mounts:	SMA 905 connector for coupling optical fiber to the spectrometer 8-32 threaded hole for post mounts
Connector:	SMA 905

