

# ISP 2000

## Integrating Sphere for measuring radiant power and luminous flux

### Product highlights

- Measurement of total radiant power and luminous flux of LED modules, lamps and luminaires
- Robust and universal sample stage for many different luminaires and SSL products
- Lamp post for measuring light sources in an upright or suspended configuration
- 600 mm external measurement port for launching light radiation from outside
- Auxiliary lamp to compensate for self-absorption



The ISP 2000 is the most recent and largest member (1.9 m diameter) of the well-established family of premium integrating spheres produced by Instrument Systems. It incorporates all the unique capabilities that brought success to its smaller peers. These characteristics are particularly effective for testing LED modules, Solid State Lighting (SSL) products, and conventional lamps and luminaires. The ISP 2000 is equipped with an auxiliary lamp to compensate for self-absorption, a temperature sensor to monitor the thermal conditions of the interior, and a detector port with a fiber adapter to link the sphere with all spectroradiometers from Instrument Systems. The company offers a complete package of calibration accessories for the ISP 2000.

The ISP 2000 can be used to carry out measurements at  $4\pi$  and  $2\pi$  geometry. The maximum sample size is 600 mm x 300 mm x 300 mm in the center and the diameter of the external port is 600 mm. A lamp post is available mounting the test specimen inside the sphere. It accommodates optional adapters for all standard lamp sockets. A sample stage can be used instead of the lamp post for mounting non-standard sample sizes, for example complete luminaires and LED modules. This stage provides a footprint of 200 mm x 150 mm and 16-pole connectors for the power supply of the sample or for controlling purposes. A robust rail-mounted slide mechanism delivers light-tight closure of the ISP 2000 and permits the sphere to be opened easily for quick access to the interior.

## Technical Specifications

Specification	ISP2000-100
Internal diameter	1900 mm
Internal coating	Barium sulfate (BaSO <sub>4</sub> ), 97% reflectance
Spectral range	240 – 2600 nm
Diameter of the measurement port	600 mm
Connection to the spectrometer	Fiber bundle
External dimensions (W, D, H)	2977 x 2010 x 2190 mm
Power supply for the auxiliary light source	12 V / 50 W
Weight	approx. 210 kg

## Ordering Information

Order number	Description
<b>ISP 2000 Integrating Sphere</b>	
ISP2000-100	Integrating sphere with 1.9 m diameter. For measuring luminous and radiant flux of lamps, LED modules and SSL products <ul style="list-style-type: none"> <li>• Rail-mounted configuration for opening and closing the sphere</li> <li>• Barium sulfate coating</li> <li>• Measurement port with 600 mm diameter for mounting the sample from outside the sphere. The port can be closed with a cover</li> <li>• Halogen auxiliary lamp with mount, 12 V, 50 W, spectral range 360 to 2200 nm</li> <li>• Internal temperature sensor</li> <li>• Adapter for fiber bundle (without fiber bundle)</li> </ul>
ISP2000-124	Integrating sphere with 1.9 m diameter. For measuring luminous and radiant flux of lamps, LED modules and SSL products. Complete system comprising: <ul style="list-style-type: none"> <li>• ISP2000-100 integrating sphere with barium sulfate coating</li> <li>• Measurement port with 600 mm diameter, incl. port cover</li> <li>• 50 W auxiliary lamp, 360 to 2200 nm</li> <li>• Temperature sensor</li> <li>• ISP2000-300 lamp post</li> <li>• ISP2000-305 socket for halogen lamps</li> <li>• ISP2000-400 height adjustable sample stage</li> <li>• OFG-444-3 fiber bundle (3 m length) and PLG-420 adapter</li> </ul>
<b>Options</b>	
ISP2000-300	Internal lamp post for mounting the sample in the center of the sphere, suspended or upright position possible, without socket
ISP2000-400	Height adjustable sample stage (200 x 150 mm) for mounting samples inside the sphere, including 16 pole strip terminal for electrical connection
ISP2000-500	Holder for tubular fluorescent lamps of type T8 and T12 with G13 socket, adjustable length 44 to 150 cm
ISP1000-305	Socket for halogen lamps of type G4/GX5.3/G6.35, for attachment to the internal lamp post ISP1000-300 or ISP2000-300
ISP1000-320	Adapter for lamps with E27 socket. For attachment to the internal lamp post ISP1000-300 or ISP2000-300
ISP1000-321	Adapter for lamps with E14 socket. For attachment to the internal lamp post ISP1000-300 or ISP2000-300
PS-120	Highly stabilized compact power supply 0-30 V, 0-10 A for the auxiliary lamp



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