Ø50 mm Integrating Sphere, 3 Input Ports

2P3/M



Description

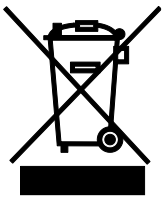
The 2P3/M Integrating Sphere features three input ports and one detector (output) port. The Ø11.5 mm input ports and the Ø3 mm output port have SM05 internal threads for mounting of fiber adapters or detectors of the SM05PDx Series, respectively. The detector port has been specially arranged in order to prevent direct irradiation of the detector even under large divergent input beams.

The 2P3/M can be mounted on a post using the M4 mounting tap on the bottom of the device. For mounting a 30 mm cage system, the 2P3/M features four 4-40 threads on all 6 sides. The integrating sphere can be opened for the insertion of optical devices or for cleaning. To clean, gently blow off any debris using compressed air.

The 2P3/M Integrating Sphere is a general purpose sphere manufactured from PTFE high reflectance bulk material. This makes the 2P3/M sphere resistant to heat, humidity, and high levels of radiation, as well as covering a large wavelength range.

Specifications

2P3/M	
Inner Sphere Diameter	50 mm (1.96")
Input Ports	3 Ports, 0°, 90° and on Top
Input Port Diameter	Ø11.5 mm (0.45")
Detector Port	Ø3 mm with SM05 Thread
Typical Reflectance	>94% @ 250 nm - 2500 nm ~99% @ 350 nm - 1500 nm
Wavelength Range	250 nm to 2500 nm
Operating Temperature	-20 °C to 60 °C
Operating Humidity	5% to 95%
Laser Damage Threshold	Pulsed: 7 J/cm^2 CW: 2 kW/cm^2
Weight	350 g
Dimensions (L x W x H)	63.0 mm x 63.0 mm x 77.0 mm (2.48" x 2.48" x 3.03")



Calibration

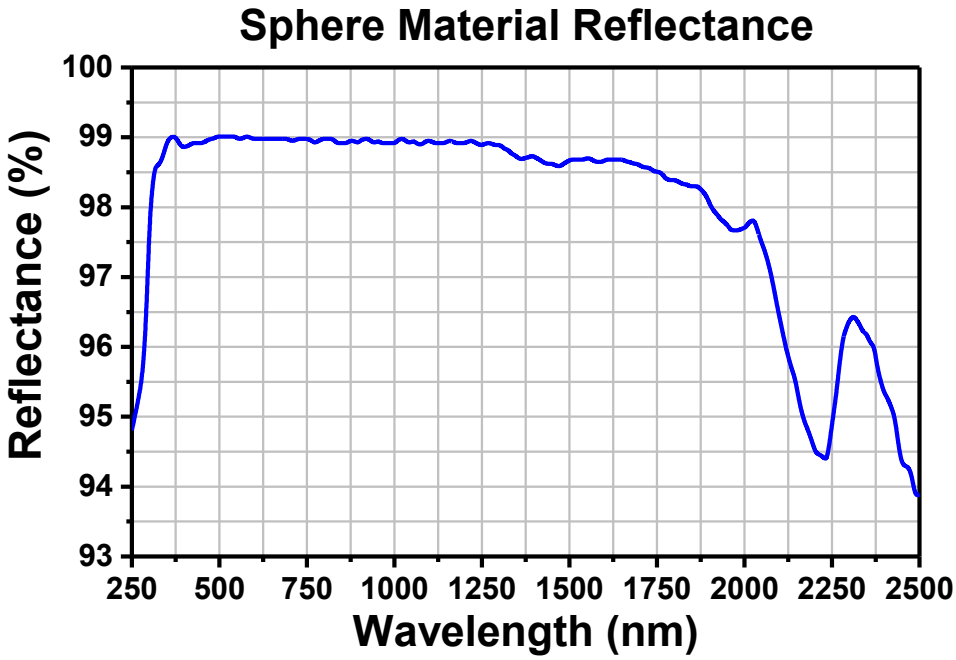
Upon request, Thorlabs offers calibration of each 2P3/M Integrating Sphere with the individual sensors of choice. Thorlabs then provides NIST and/or PTB-traceable certificates of calibration.

Available Accessories

The following Thorlabs accessories for the 2P3(/M) or 2P4(/M) integrating spheres are available through the Thorlabs website.

2P10	Replacement Input Port Plug for Ø50 mm Integrating Sphere
2P-FC	SM05 Threaded FC/PC Adapter for Ø50 mm Integrating Sphere
2P-SMA	SM05 Threaded SMA Fiber Adapter for Ø50 mm Integrating Sphere
2P-25	SM05-Threaded Ø2.5 mm Ferrule Adapter for Ø50 mm Integrating Sphere
2P-DA1	Slim Dovetail Adapter for Ø50 mm Integrating Sphere
2P-DA2	Dovetail Adapter with Filter Holder for Ø50 mm Integrating Sphere
2P-DAF	Additional Filter Holder Insert for 2P-DA2

Typical Performance Plot



Maintenance and Safety

There are no serviceable parts in the 2P3/M Integrating Sphere. The housing may be cleaned by wiping with a soft damp cloth. The integrating sphere inner surface cannot be cleaned; do not touch this surface. Gently blow off any debris using compressed air. Please do not open/close the housing at temperatures >25 °C. Due to temperature-dependent expansion of the PTFE, the housing can only be closed/opened with difficulty or not at all. For easier handling, it would be possible to place the housing in the refrigerator for 5-10 min.

If you suspect there is a problem with your 2P3/M Integrating Sphere, please contact Thorlabs and an engineer will be happy to assist you.