

ISP 75B/100B

Integrating spheres for VIS with barium sulfate coating

Key features at a glance

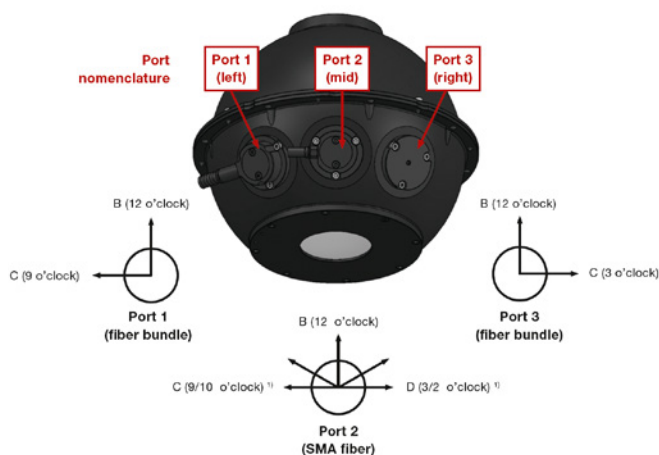
- ▲ Inner diameter 75 and 100 mm
- ▲ BaSO₄ (Barium sulfate) coating with a reflectance of approximately 97 % in VIS
- ▲ 3 ports with configurable fibers
- ▲ Measuring port configurable
- ▲ Optional accessories



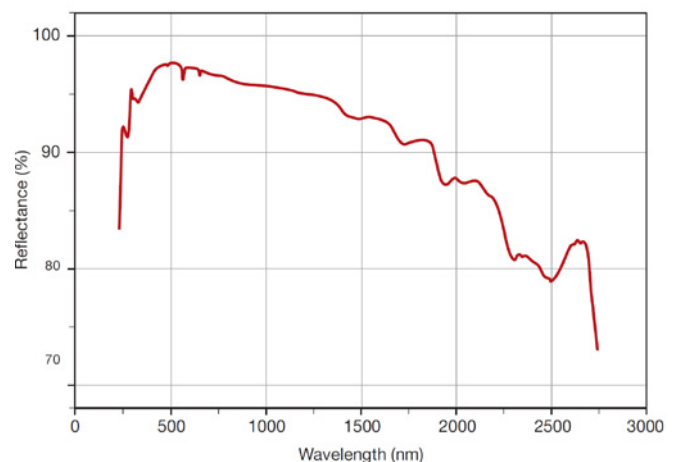
The Instrument Systems Barium sulfate (BaSO₄) integrating spheres (with inner diameters of 75 mm and 100 mm) are provided with three customizable adapter ports. They can be equipped individually with a fiber bundle adapter on ports 1 and 3 (see image below) for an Instrument Systems spectroradiometer, or an SMA fiber adapter on port 2 (see image below) for an auxiliary light source (e.g. Instrument Systems' LS 500, combined deuterium and halogen lamp to cover the entire spectral range) for self-absorption correction.

Positioning of all ports on one sphere side, away from equator, improves measurement accuracy. The adapters can be aligned either perpendicular (at the 12 o'clock position) or parallel (at the 3 or 9 o'clock position) to the measuring plane as desired. The customer has an assortment of measurement port accessories at his disposal to suit all respective applications in laboratory and production. Flat protective windows and protective domes prevent contamination in the integrating sphere and can be expanded with adapter plates for a variety of LED test sockets.

\ \ SKETCH OF POSSIBLE CONFIGURATIONS



▲ The fiber bundle and SMA adapters can be oriented either perpendicular (12 o'clock position) or parallel (9 or 3 o'clock) to the measuring plane as displayed above. For the ISP 250-PTFE SMA adapter, 10 and 2 o'clock are available in addition to the perpendicular orientation (12 o'clock).



▲ Dependency of reflectance on wavelength

\\ TECHNICAL SPECIFICATIONS

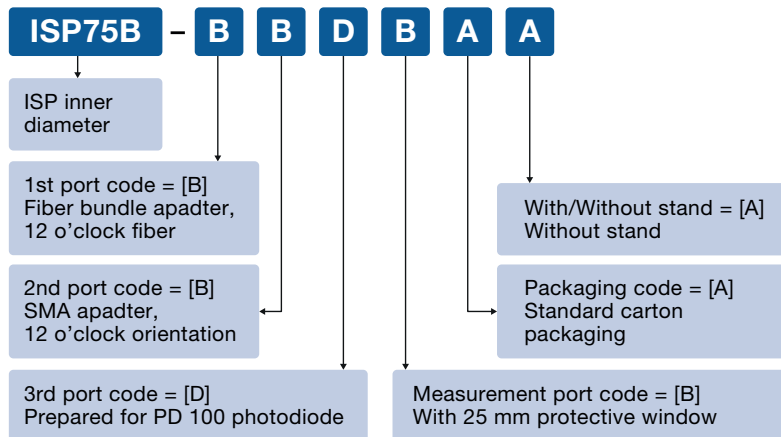
ISP 75B/100B integrating spheres for VIS with BaSO ₄		
Model/main unit	ISP 75B	ISP 100B
Inner diameter	75 mm	100 mm
External dimensions (L x W x H)	100 mm x 100 mm x 78.2 mm	25 mm x 125 mm x 107.5 mm
Measurement port (without mounted accessories)	Ø 25 mm	Ø 33 mm
Useable wavelength	300 – 2600 nm	300 – 2200 nm

Possible configurations				
		ISP 75B	ISP 100B	Config. letter
Port 1 (Fiber bundle adapter)	No fiber bundle adapter (blind cap)			[A]
	12 o'clock position			[B]
	9 o'clock position			[C]
	Prepared for PD100 photodiode			[D]
Port 2 (SMA connector for SAC)	No SMA adapter (blind cap)			[A]
	12 o'clock position			[B]
	9 o'clock position			[C]
	3 o'clock position			[D]
Port 3 (Fiber bundle adapter)	No fiber bundle adapter (blind cap)			[A]
	12 o'clock position			[B]
	3 o'clock position			[C]
	Prepared for PD 100 photodiode			[D]
Measuring port	Open port	Ø 25 mm	Ø 33 mm	[A]
	With protective window	Ø 25 mm	Ø 33 mm	[B]
	With protective dome	Ø 20 mm	Ø 26 mm	[C]
Stand included	Without stand			[A]
	With stand			[B]
Packaging	Industrial packaging (carton)			[A]
	Hard shell case (for lab re-use)			[B]

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\ \ CONFIGURATION EXAMPLE

Part no. ISP75B-0001



Available accessories / Spare parts			
Description	Part number	ISP 75B	ISP 100B
Protective window	ISPx-140*	Ø 25 mm	Ø 33 mm
Protective dome	ISPx-143*	Ø 20 mm	Ø 26 mm
LED adapter plate (including protective dome and aperture set)	ISPx-211*	Without aperture: Ø 25 mm With aperture: Ø 7, 10, 15, 20 mm ³⁾	
Stand / base	ISPx-901*	109 x 143 x 101 mm	109 x 143 x 101 mm

* x = 75B or 100B

Part number of pre-configured spheres							
Part number	Config.-code	Port 1	Port 2	Port 3	Measurement port	Stand	Packaging
ISP75B-0001	BBABAA	12 o'clock fiber	12 o'clock SMA	No fiber	Window: Ø 25 mm	-	Standard carton packaging
ISP75B-0002	BBDBAA	12 o'clock fiber	12 o'clock SMA	Prepared for PD100 photodiode	Window: Ø 25 mm	-	Standard carton packaging
ISP100B-0001	BBDBAA	12 o'clock fiber	12 o'clock SMA	Prepared for PD100 photodiode	Window: Ø 33 mm	-	Standard carton packaging
ISP100B-0002	BBABAA	12 o'clock fiber	12 o'clock SMA	No fiber	Window: Ø 33 mm	-	Standard carton packaging
ISP100B-0003	BBDABA	12 o'clock fiber	12 o'clock SMA	Prepared for PD100 photodiode	Open measurement port	●	Standard carton packaging
ISP100B-0004	BBDAAA	12 o'clock fiber	12 o'clock SMA	Prepared for PD100 photodiode	Open measurement port	-	Standard carton packaging