

Archimedes' Polyhedral Integrating Sphere

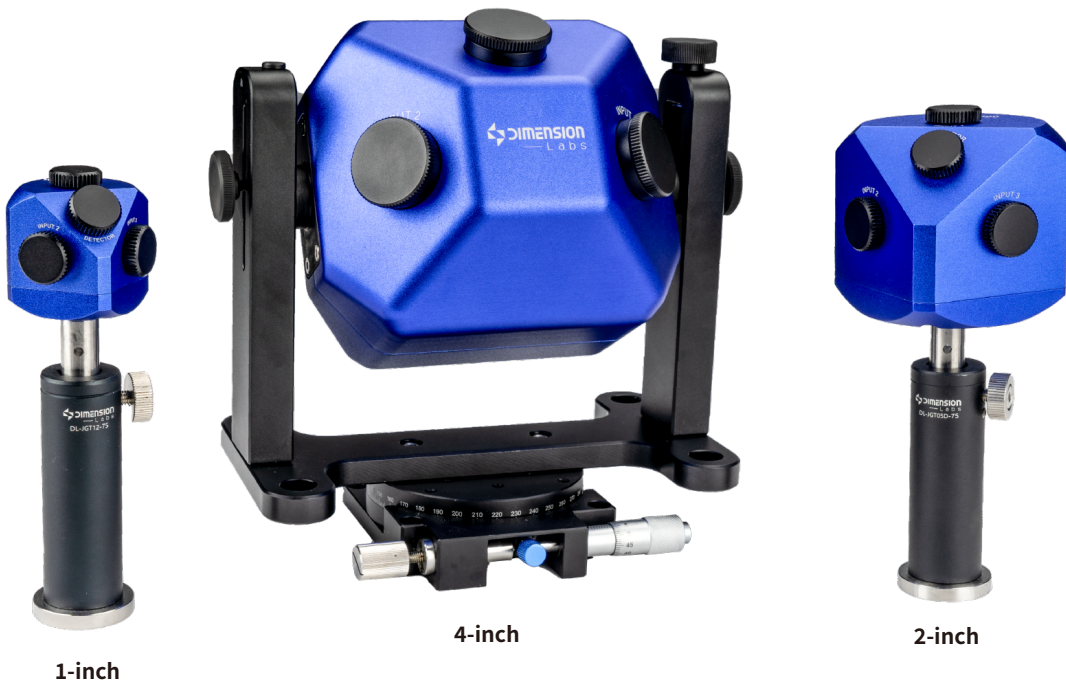
A Clever Collision of Modern Craftsmanship and Classic Geometry



Dimension-Labs re-launched Archimedes polyhedral integrating sphere series products, specially tailored for optical instrumentation, the design inspiration comes from the classic Archimedes polyhedron, the overall structure fully demonstrates the classical geometric aesthetics and modern craftsmanship of the subtleties. They are widely used in the field of optical power, spectral and illumination measurement. Its unique multi-faceted design allows each side to be perfectly integrated with different accessories and equipment, providing users with an unprecedented measurement experience.

Whether in terms of specification size, reflectivity, or uniformity, the series demonstrates excellent performance, ensuring accurate and reliable measurement results. In addition, they are specially equipped with a multifunctional adjustment bracket, which can flexibly respond to various challenges in actual measurement scenarios, greatly improving work efficiency and rapidly advancing the project process.

Archimedes Integrating Sphere Product Series



►► Product Features



1", 2", 4" Available



Reflectivity $\geq 98\%$



Flexible Choice of
Accessories



Swivel Bracket
Adjustment



PTFE Coated and
Gold Plated Available



Standard SM1
SM05 Threads



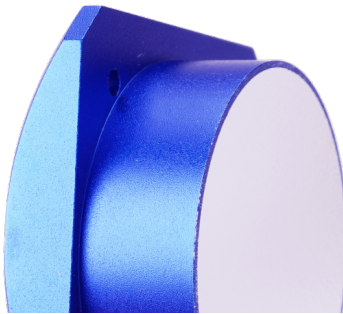
Flexible Configuration of
Fiber Optic Flanges

► 1", 2", 4" Available

This series of integrating ball products is unique in design, with a polyhedral shape, demonstrating the mastery of modern industrial design. The inner cavity diameter is carefully planned with three sizes: 1 inch (25.4mm), 2 inches (50.8mm) and 4 inches (101.6mm), which not only meets a wide range of practical application scenarios in the field of scientific research, but also ensures that the user can find the most suitable size choice in different research projects.



► Reflectivity $\geq 98\%$



Dimension-Labs introduces a series of Archimedes Polyhedral Integrating Spheres with innovative technology and exquisite craftsmanship. This series of products utilizes high quality PTFE material and ensures an internal reflectivity of more than 98% through sophisticated coating technology. Compared with the traditional MgO and BaSO₄ coating materials, Archimedes Polyhedral Integrating Sphere series products have achieved a significant performance improvement, bringing better user experience.

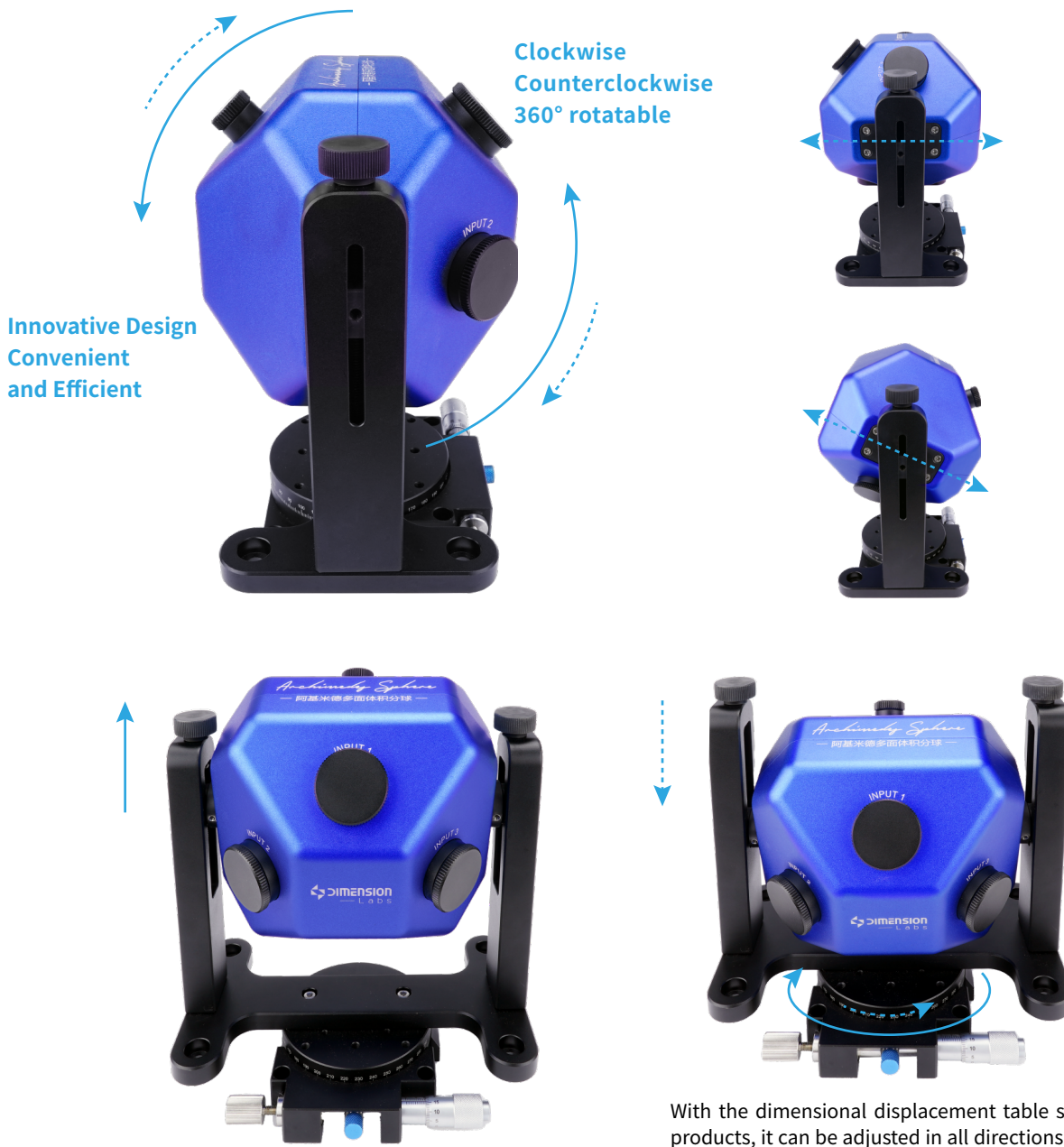
► Flexible Selection of Fittings, Standard SM1, SM05 Threads

Dimension-Labs' in-house developed optical integrating spheres show a high degree of adaptability and innovation. Each integrating sphere is available with a variety of high-precision accessories, including precision detectors, stabilized light sources, high-efficiency hole reducers, and high-quality fiber optic flanges. Each accessory follows international standard thread dimensions to ensure easy and efficient installation and replacement.



► Swivel Bracket Adjustment

After careful research and development, this series of optical integrating spheres is not only beautiful, but also practical and durable. For the 4-inch integrating sphere, Dimension has specially designed a rotatable and adjustable bracket that allows users to easily adjust the position and angle of the integrating sphere through simple operation. This innovative design not only greatly enhances the convenience of measurement, but also significantly improves the measurement efficiency.

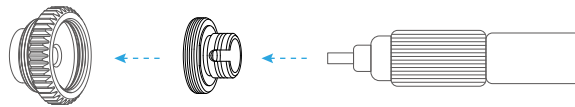


With the dimensional displacement table series products, it can be adjusted in all directions with high precision, adapting to the needs of the actual scene of a variety of angle measurement.

► Flexible Configuration of Fiber Optic Flanges

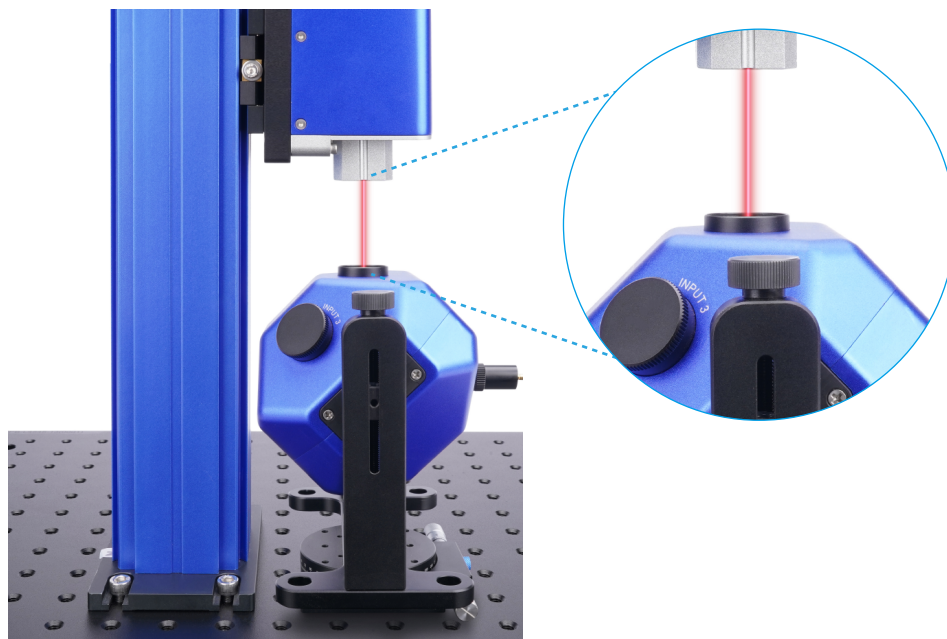


This series of general-purpose optical integrating sphere products, with a wide range of applications, not only plays an important role in the field of space lasers and illumination, but also in the field of spectroscopic measurement and fiber optics and spectrometers and other high-end equipment to work together, configured with standard SM1 and SM05 thread specifications of the SMA and FC interfaces fiber optic flange, to provide users with efficient and accurate sample data measurement experience.



► Laser Power Measurement

Laser applications, beam collimation and coupling as well as shaping is a common mode of operation, and its process is particularly important for the accurate measurement of laser power. At the same time, although the traditional laser power meter can meet the needs of the measurement accuracy, but the power measurement range can not be realized, and the use of the integrating sphere as a measurement probe can significantly increase the upper limit of the measurement, but also to ensure the accuracy of the results.



► Spectral Measurement

Integrating sphere has a wide range of applications in spectral measurement, it can be used to measure parameters such as luminous flux, color temperature, and luminous efficacy of the light source, and it can also be used for color analysis and matching. By measuring the spectral distribution of different wavelengths of light inside the integrating sphere, parameters such as color coordinates of the color, color temperature, and color rendering index of the colors can be obtained, which can be used for color management and quality control.



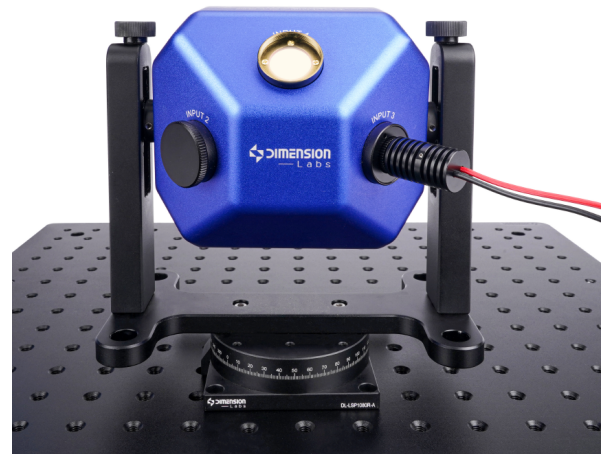
► Transmission Reflectance Measurement

Integrating spheres can be used to examine the reflection and transmission characteristics of optical elements. By placing the optical element at the entrance of the integrating sphere and measuring the distribution and intensity of the reflected and transmitted light, the optical element can be evaluated. distribution and intensity of the reflected and transmitted light, the performance and quality of the optical element can be evaluated. The performance and quality of an optical element can be evaluated by measuring the distribution and intensity of reflected and transmitted light.



► Integrating Sphere Uniform Light Source

The integrating sphere can also be used to generate a uniform light source, which is mainly used in the fields of calibration test spectrometers, electronic imaging devices, CCD cameras, calibration photometers and radiometers, illuminance testing of optical densities and target panels, testing of optical systems for MTFs, testing of fiber optic transmittance, and so on.



► Product Specification

Product Model	ISP-1x3-P-A	ISP-2x3-P-A	ISP-4x3-P-A
Type			
Inner Diameter	1-inch	2-inch	4-inch
Number of Openings	3	3	3
Size of Opening	6mm	10mm	18mm
Coating Material	PTFE(Optional gold plating)	PTFE(Optional gold plating)	PTFE(Optional gold plating)
Wavelength Range	250-2500nm	250-2500nm	250-2500nm
Reflectivity	≥98%	≥98%	≥98%
Opening Thread	SM05	SM05	SM1
Accessories	Standard: plugger Options: reducer, detector, light source, fiber optic flange		

► Accessories

Name	Reducer	
Model	ISR-P3	ISR-P6
Type		
Description	10mm-->5mm	18mm-->10mm
Thread	SM05	SM1
Coating Material	PTFE	

Name	Detector		
Model	ISD-PS	ISD-PG	ISD-PI
Type			
Description	Si	Ge	InGaAs
Thread	SM05		
Coating Material	PTFE		

Name	Light Source		
Model	ISL-H1	ISL-H2	ISL-P1
Type			
Description	Halogen Light Source5W	Halogen Light Source30W	Light Source Adapter
Thread	SM05		SM1External Thread SM05Internal Thread
Coating Material	PTFE		

Name	Fiber Optic Flange			
Model	ISF-P1	ISF-P2	ISF-P3	ISF-P4
Type				
Description	FC	FC	SMA	SMA
Thread	SM05	SM1	SM05	SM1
Coating Material	PTFE			



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Product specifications and descriptions in this document
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