GAMMA SCIENTIFIC
Light Measurement Solutions

Gamma Scientific Integrating Spheres

9925 Carroll Canyon Road San Diego, CA 92131 | 858-279-8034 | contact@gamma-sci.com | www.gamma-sci.com

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Integrating Spheres

With over 40 years of experience in designing integrating spheres, Gamma Scientific has the expertise to build custom integrating spheres and sphere systems to meet your testing requirements.

Gamma Scientific integrating spheres are available in a wide range of sizes from 25mm to 3m in diameter. Multi-purpose integrating spheres provide maximum flexibility and are custom built to meet your exact testing requirements. Light measurement spheres for LED testing are optimized for capturing total flux measurements of LEDs, lamps and luminaires.

All spheres come with your choice of coating. Choose from our proprietary polytetrafluoroethylene (PTFE) or a specially formulated barium-sulfate coating. The PTFE coating gives > 99% reflectance over the UV/VIS/NIR region, and is almost perfectly Lambertian. Our barium-sulfate coating is lightweight and rugged offering a highly diffuse reflectance of 95% over the UV/VIS/NIR region.

Light Measurement Spheres

The GS-IS-Series of general purpose integrating spheres are available in standard sizes from 25 mm to 3 meters (1 inch to 120 inches) in diameter, with standard configurations for total flux measurements of lamps, LED's and luminaires. Hinged spheres that open up allowing internal access are also available.

These integrating spheres have a wide variety of applications in areas where it is necessary to collect radiant flux of a polarized nature as well as widely varying angular distributions. It sufficiently integrates these fluxes to yield a uniform radiance field for the detectors.

About Gamma Scientific

Since 1961 Gamma Scientific has produced LED, display and light measurement test solutions for production and R&D environments. Gamma Scientific instruments are trusted by leading global organizations that require high-speed, precision measurements and custom configurations for the most challenging environments. Gamma Scientific also operates a NVLAP accredited laboratory that performs LM-79/LM-80 LED testing and is ISO 17025 compliant. NVLAP Lab Code 200823-0.

To view the complete line of test and measurement solutions from Gamma Scientific, please visit our website at www.gamma-sci.com.

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Integrating Spheres

Features

- Standard sizes from 25mm to 3m
- Rugged Design
- Custom size and configurations
- Proprietary PTFE or Barium-Sulfate Coating

Applications

- LED and SSL (Solid State Lighting) Measurement
- Laser Power Measurement
- Fiber-Optic Testing
- Automotive Lighting
- Standard Lamps and Bulbs
- Photometric and Radiometric Measurements
- As a Uniform Light Source
- Total Luminous Flux
- Optical Power Measurements

Spectral Sphere Systems

New Spectral Sphere Systems from Gamma Scientific combine our integrating spheres and RadOMA Spectroradiometers to produce highly repeatable measurements of total luminous flux and total spectral flux.

Spectral Sphere Systems are uniquely designed for easy integration with your production lines or as turnkey LED test systems for RnD and QA applications.

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Integrating Sphere Selection Chart

Model	Diameter	Coating	Internal Baffles
GS-IS1	1 inch / 25 mm	PTFE or Barium-Sulfate	No
GS-IS1.5	1.5 inch / 38 mm	PTFE or Barium-Sulfate	No
GS-IS4	4 inch / 100 mm	PTFE or Barium-Sulfate	Yes
GS-IS6	6 inch / 150 mm	PTFE or Barium-Sulfate	Yes
GS-IS8	8 inch / 200 mm	PTFE or Barium-Sulfate	Yes
GS-IS12	12 inch / 300 mm	Barium-Sulfate	Yes
GS-IS12-TLS-H	12 inch / 300 mm	Barium-Sulfate	Yes
GS-IS20	20 inch / 500 mm	Barium-Sulfate	Yes
GS-IS40	40 inch / 1000 mm	Barium-Sulfate	Yes
GS-IS60	60 inch / 1500 mm	Barium-Sulfate	Yes
GS-IS80	80 inch / 2000 mm	Barium-Sulfate	Yes
Standard Port Locations			
2 port	0° and North Pole or 0° and 90°		
3 port	0°, 90° and North Pole		
4 port	0°, 90°, 270° and North Pole		
5 port	0°, 90°, 180°, 270° and North Pole		

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Multi-Purpose Integrating Spheres

With over 40 years of experience in designing integrating spheres, Gamma Scientific has the expertise to build custom integrating spheres and sphere systems to meet your testing requirements.

Multi-Purpose Integrating Spheres from Gamma Scientific have been designed to provide maximum flexibility for a wide range of testing applications. With multi-purpose integrating spheres we can quickly build a custom sphere to meet your exact test requirements.

Custom Built Integrating Spheres

Get started by choosing your required interior diameter size, reflectance coating material and port configuration. We will then custom build the integrating sphere based on your specific requirements. This ensures that you receive a sphere which is optimized for your exact test and measurement needs.

Complete Light Measurement Systems

Multi-purpose integrating spheres can be coupled with Gamma Scientific spectrometers, spectroradiometers and light sources to create custom light measurement systems for nearly any testing need.

Gamma Scientific instrument calibration is performed in our accredited laboratory using NIST-traceable standards by our staff of experienced scientists and engineers.

All Gamma Scientific instruments are distinguished by their value, providing unmatched quality at competitive prices.

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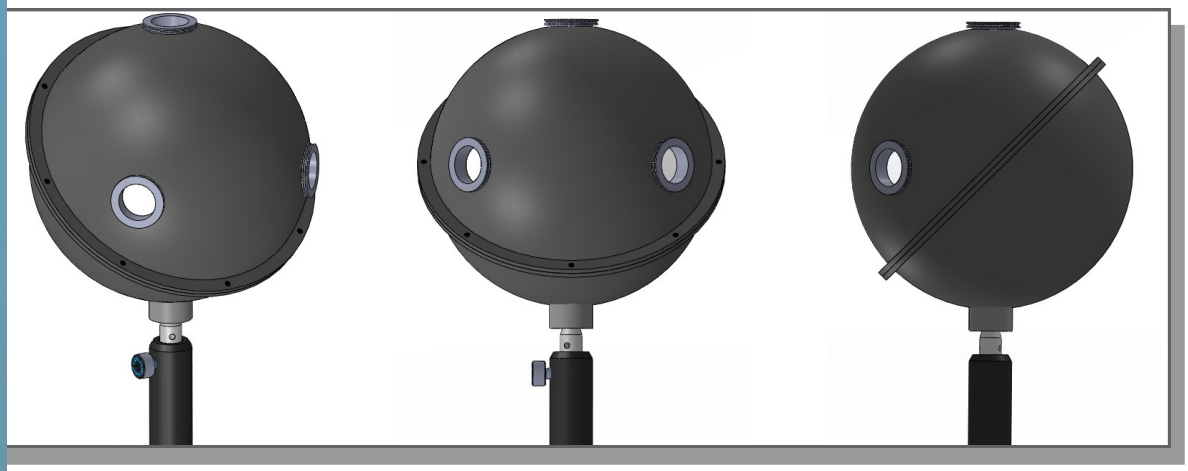
Multi-Purpose Integrating Spheres



Multi-Purpose Integrating Sphere Applications

- LED and SSL (Solid State Lighting) Measurement
- Laser Power Measurement
- Fiber-Optic Testing
- Automotive Lighting
- Standard Lamps and Bulbs
- Photometric and Radiometric Measurements
- As a Uniform Light Source

Measurement Capabilities

- Total Luminous Flux
- Optical Power Measurements

LED Integrating Spheres

LED Integrating Spheres from Gamma Scientific range in size from 25mm to 3m and are specially designed to measure total luminous flux for LEDs and lamps. LED spheres can be combined with our line of spectrometers, spectroradiometers, light sources and accessories to construct complete LED measurement systems.

Spectral Sphere Systems

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Multi-Purpose Integrating Sphere Selection Chart

Model Number	Diameter(in)	Coating	Entrance/Exit	90°	North Pole	180°
GS-IS-010-MP-3P-B	1	Barium Sulfate	0.25	0.25	0.25	
GS-IS-010-MP-3P-T	1	Teflon(PTFE)	0.25	0.25	0.25	
GS-IS-010-MP-4P-B	1	Barium Sulfate	0.25	0.25	0.25	0.25
GS-IS-010-MP-4P-T	1	Teflon (PTFE)	0.25	0.25	0.25	0.25
GS-IS-020-MP-3P-B	2	Barium Sulfate	1	0.5	0.5	
GS-IS-020-MP-3P-T	2	Teflon(PTFE)	1	0.5	0.5	
GS-IS-020-MP-4P-B	2	Barium Sulfate	1	0.5	0.5	0.5
GS-IS-020-MP-4P-T	2	Teflon(PTFE)	1	0.5	0.5	0.5
GS-IS-040-MP-3P-B	4	Barium Sulfate	1.5	1	1	
GS-IS-040-MP-3P-T	4	Teflon(PTFE)	1.5	1	1	
GS-IS-040-MP-4P-B	4	Barium Sulfate	1.5	1	1	1
GS-IS-040-MP-4P-T	4	Teflon(PTFE)	1.5	1	1	1
GS-IS-060-MP-3P-B	6	Barium Sulfate	2.5	1	1	
GS-IS-060-MP-3P-T	6	Teflon(PTFE)	2.5	1	1	
GS-IS-060-MP-4P-B	6	Barium Sulfate	2.5	1	1	1
GS-IS-060-MP-4P-T	6	Teflon(PTFE)	2.5	1	1	1

*Standard Operating Range for Gamma Scientific Instruments- Temperature: Minimum: 0°C (32°F) - Maximum: 35°C (95°F); Relative Humidity (Non-Condensing): Minimum: 20% - Maximum 70%
**The information contained in this data sheet is based on Gamma Scientific's internal evaluation and is subject to change at any time without notice.
***Revised on April 9, 2015