

LP Series Laser Power Measurement Spheres

We offer a wide selection of laser power measurement spheres and sphere/detector assemblies for precise measurement of the total output power of lasers and laser diodes. Laser power measurement spheres may be purchased as sphere-only or sphere/detector combinations giving you the flexibility to integrate them with your current electronic components.

LP Sphere Series

Our LP Series laser power measurement spheres are specially designed to allow maximum angular insensitivity of divergent sources at the input port. The spheres are available in sizes ranging from 2 to 12 inches in diameter with a choice of our UV-VIS-NIR OptoWhite or Zenith interior materials, or our IR ZenithGold coating.

LP Sphere/Detector Assembly Series

The LP sphere/detector series offers several different detector assembly options, including Silicon, Germanium or InGaAs. The sphere/detector assembly provides a functional measurement head that can easily be integrated with your existing radiometer. All sphere/detector models can be calibrated for spectral responsivity according to the calibration options listed on this datasheet. Calibrations are traceable to National Institute of Standards and Technology (NIST).

Integrating Sphere Design Features

Our *LP Series* sphere designs incorporate a forward-offset detector port. This 0.50 inch port has a special adapter to baffle the field-of-view, allowing < 1% angular responsivity variation over $\pm 40^\circ$ horizontally and $\pm 85^\circ$ vertically. The adapter features an inset area that allows filters to be placed in front of the detector. The design incorporates two additional ports; one at north pole and one 90° clockwise from the input port. The north pole port accepts any of our SMA, FC/PC or ST fiber adapters for looking at the spectral distribution of the input energy. Our 2,4 and 6inch diameter LP spheres include an M6 threaded hole at the south pole for attaching mounting posts and bases. A 1/4-20 to M6 threaded adapter is provided with all spheres for conversion to a standard optical table. The LP-12-Z and G models are supported on sturdy a H-bracket with base.

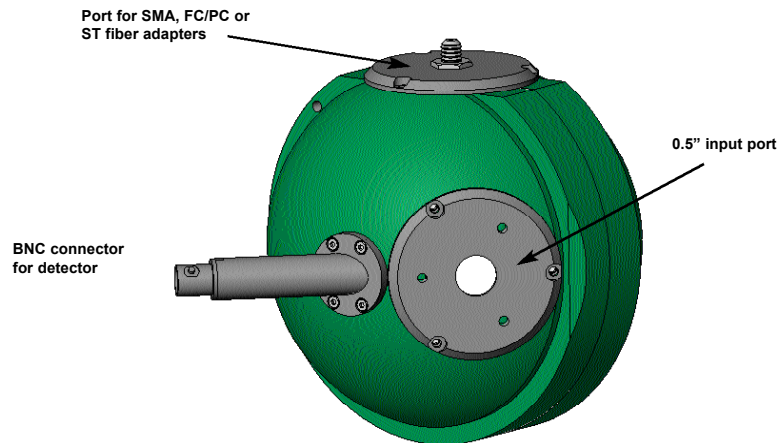
FEATURES

- Sphere design spatially insensitive to $\pm 40^\circ$ H and $\pm 85^\circ$ V
- Signal from sphere/detector combination is independent of input beam geometry
- Multiple detector options:
 - Silicon, Germanium and InGaAs
- Multiple detector ports for pulsed and average power characterization
- Fiber adaptors for spectral distribution analysis
- NIST traceable system calibrations

APPLICATIONS

- Measure
 - collimated & divergent lasers and light sources
 - laser diode devices
 - laser output

OPTOWHITE AND ZENITHGOLD SPHERE CONFIGURATION



CALIBRATION ORDERING INFORMATION

Sphere/detector assemblies can be calibrated for spectral power responsivity by purchasing one or more of the following optional calibrations. A calibration certificate and tabular data are included with each calibration purchased. Calibration is traceable to National Institute of Standards and Technology (NIST).

SR-5-S	Full range 250 to 1100 nm, every 10 nm (A/W) Silicon spectral power responsivity
SR-5-S-1	Single wavelength, Silicon spectral power responsivity
SR-5-G	Full range, 800 to 1800 nm, every 10 nm (A/W) Germanium spectral power responsivity
SR-5-G-1	Single wavelength, Germanium spectral power responsivity
SR-5-I	Full range, 900 to 1700 nm, every 10 nm (A/W) InGaAs spectral power responsivity
SR-5-I-1	Single wavelength, InGaAs spectral power responsivity

ORDERING INFORMATION

LP SERIES SPHERES

Order Number	Sphere Dia. (in)	Port Dia. (in)	Sphere Interior	Detector Mount Style
LP-2	2	0.50	Optowhite	TO-5
LP-4	4	1.00	Optowhite	TO-5
LP-6	6	1.50	Optowhite	TO-5
LP-2-Z/G*	2	0.50	Zenith/Zenith Gold	TO-5
LP-4-Z/G*	4	1.00	Zenith/Zenith Gold	TO-5
LP-6-Z/G*	4	1.50	Zenith/Zenith Gold	TO-5
LP-12-Z/G*	12	4.00	Zenith/Zenith Gold	TO-5

*When ordering, designate the letter Z to specify Zenith spheres and the letter G to specify ZenithGold

LP SERIES SPHERE / DETECTOR ASSEMBLIES

Order Number	Sphere Dia. (in)	Port Dia. (in)	Sphere Interior	Detector Type	Calibration Range	Responsivity A/W
LP-2-S	2	0.50	Optowhite	Silicon	250 - 1100 nm	$\sim 2E^{-4}$ at 850 - 980 nm
LP-2Z-S	2	0.50	Zenith	Silicon	250 - 1100 nm	$\sim 7E^{-4}$ at 850 - 980 nm
LP-2Z-G	2	0.50	Zenith	Germanium	800 - 1800 nm	$\sim 2E^{-4}$ at 980 nm
LP-2Z-I	2	0.50	Zenith	InGaAs	900 - 1700 nm	$\sim 4.4E^{-4}$ at 980 nm
LP-4-S	4	1.00	Optowhite	Silicon	250 - 1100 nm	$\sim 5E^{-5}$ at 850 - 980 nm
LP-4Z-S	4	1.00	Zenith	Silicon	250 - 1100 nm	$\sim 2E^{-4}$ at 850 - 980 nm
LP-4Z-G	4	1.00	Zenith	Germanium	800 - 1800 nm	$\sim 6E^{-5}$ at 850 - 980 nm
LP-4Z-I	4	1.00	Zenith	InGaAs	900 - 1700 nm	$1.3E^{-4}$ at 980 nm
LP-4Z-ISI	4	1.00	Zenith	InGaAs	900 - 1700 nm	
				Silicon	250 - 1100 nm	$\sim 6E^{-5}$ at 850 - 980 nm
LP-6-S	6	1.50	Optowhite	Silicon	250 - 1100 nm	$\sim 3E^{-4}$ at 850 - 980 nm
LP-6Z-S	6	1.50	Zenith	Silicon	250 - 1100 nm	$\sim 1E^{-4}$ at 850 - 980 nm
LP-6Z-G	6	1.50	Zenith	Germanium	800 - 1800 nm	$\sim 3E^{-5}$ at 850 - 980 nm
LP-6Z-I	6	1.50	Zenith	InGaAs	900 - 1700 nm	$\sim 6E^{-5}$ at 980 nm
LP-6Z-ISI	6	1.50	Zenith	InGaAs	900 - 1700 nm	
				Silicon	250 - 1100 nm	$\sim 3E^{-5}$ at 980 nm

Ask for a copy of our data sheet for information about our Laser Power Measurement Systems.



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As part of our product improvement program, specifications are subject to change without notice.

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