



# Pulsed Laser Power Measurement Systems

Accurate, reproducible method of determining total laser and laser diode power

## Ideal for Beam Power Measurement

Labsphere's Pulsed Laser Power Measurement Systems assure an accurate, reproducible method of determining the total power from a collimated or divergent laser or laser diode. Specifically designed for laser applications, the spheres are ideal for measuring the total power of a beam of optical radiance. Because of the unique geometry of the sphere, beam power measurements are independent of beam polarization, and are insensitive to beam alignment.

The attenuation which accompanies the sphere throughput also alleviates detector saturation. The systems can be used with an open port and can be apertured with an array of optional fiber adaptors for laser diode modules or port reducers.

## Flexible Design

Each system consists of a laser power measurement sphere, post, post holder and base assembly, a detector assembly, and multi-wavelength calibration. A second detector port gives the user the flexibility to add an additional detector assembly for broader spectral sensitivity, or add a spectrometer for spectral characterization.

An input port that permits a beam of radiation is machined into the sphere. A detector, located 45° from the entrance port, views the sphere wall next to the entrance port. The field of view of the detector is designed to limit the viewing area so that highly divergent sources may be input without effecting measurement accuracy.

The systems provide options for laser power measurement over the 350 to 1800 nm wavelength region for optical powers ranging from 0.1  $\mu$ w to hundreds of watts. The system's calibrations are traceable to the National Institute of Standards and Technology (NIST).

The 2, 4, or 6 inch diameter integrating spheres are coated with either Labsphere's Spectrafect® or Infragold®, or fabricated from Spectralon®, our highly reflective diffuse material. All options are durable and highly stable over time. These diffuse reflective interiors ensure the accurate integration of light.

## Value

- Spectrafect, Infragold or Spectralon sphere interiors for reduced alignment sensitivity
- Sturdy port frames for mounting fiber accessories
- Second detector port for a spectrometer or additional fiber
- Three integrating sphere size options
- Three detector options
- NIST traceable system calibrations

## Measures

- Lasers
- Laser diodes
- Laser diode modules
- Divergent monochromatic sources
- Pulsed laser