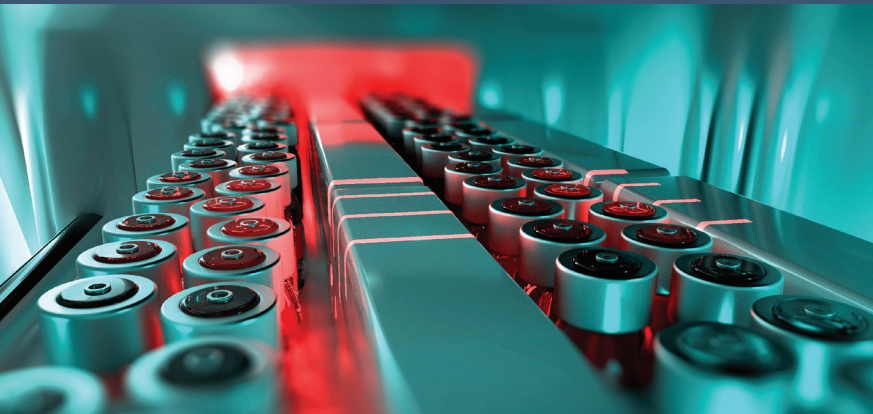


Laser Power Measurement Solutions



Labsphere

MEASURE
any light source

CREATE
any spectrum

REFLECT
any wavelength



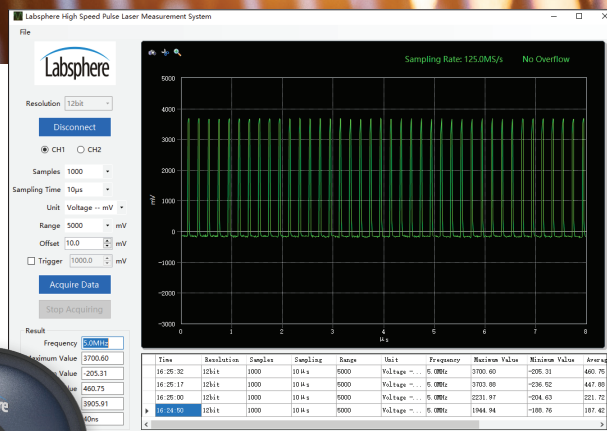
200 MHz High Speed Pulsed Laser Power Measurement Systems

Ideal for characterizing power performance of pulsed laser used for:

- Precision cutting and drilling
- Laser surgery
- Biological imaging
- Surface modification
- Thin film deposition
- Patterning and structures

New challenges to traditional optical inspection systems have emerged due to the characteristics of pulsed lasers. If the power of the pulsed laser changes with the time cycle, it is necessary to sample and analyze the laser power in one or more cycles, and then obtain the peak power, average power, pulse width, duty cycle and other characteristics of the laser. As the frequency of pulsed lasers gradually increases, the performance requirements for all aspects of the system gradually increase.

The LPMS-200M Systems use highly sensitive, highly stable high-speed detectors with extremely low dark current and spectral response ranging from visible to infrared. The LPMS-200M Systems feature a high speed power meter specially developed by Labsphere for high speed pulsed laser detection, which can achieve a sampling rate of 500 M/s.



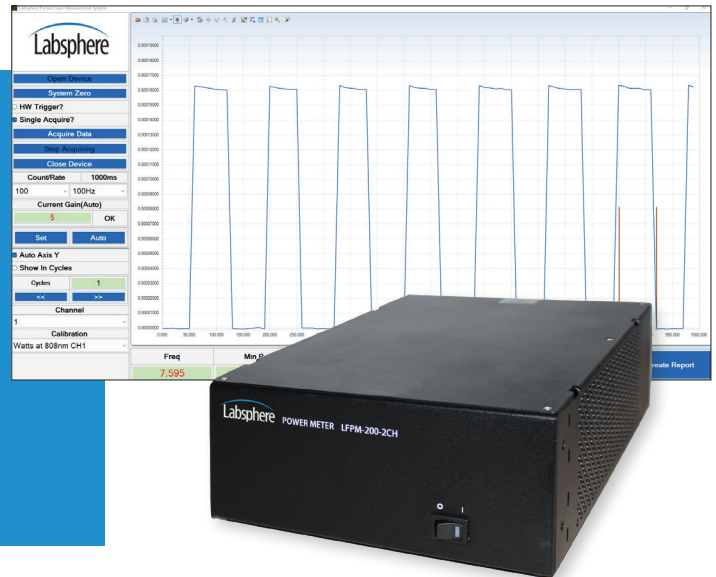
Features:

- High speed sampling, up to 500M S/s sampling rate
- Bandwidth 200 MHz
- High hardware resolution (Up to 16 bit resolution)
- Dual simultaneous sampling and compatible with external triggers
- Powerful software features with open APIs

200 kHz Pulsed Laser Power Measurement Power Meter and Systems

Ideal for characterizing power performance of pulsed laser used for:

- Medical applications including laser surgery and dermatology
- High speed imaging techniques
- Time resolved application requiring high temporal resolution
- Laser cleaning and surface preparations
- Lidar and remote sensing object detection



The LFPM-200K-2CH from LabSphere is a high speed optical power meter designed for the continuous and pulse measurement of photodetector currents. When paired with laser power measurement sphere sensors, it provides a quick and convenient solution for testing and characterizing laser and laser-based systems. This adaptable instrument is valuable for both continuous and pulsed laser power measurement, catering to the requirements of research and development as well as production line applications.

The LFPM-200K-2CH comes with robust software that seamlessly controls the hardware gain, optimizing the readout for the best operational mode. This intelligent feature significantly minimizes the need for manual control and enhances measurement throughput.

Features:

- Simple one page software to set all the parameters and read results
- Text based calibration file for easier customer modification
- Dark noise subtraction by software
- Channel selectable via software
- Easy switch between software and hardware triggers

Complete your laser measurement solution by pairing the LFPM-200K-2CH with any of LabSphere's versatile Laser Power Measurement Spheres





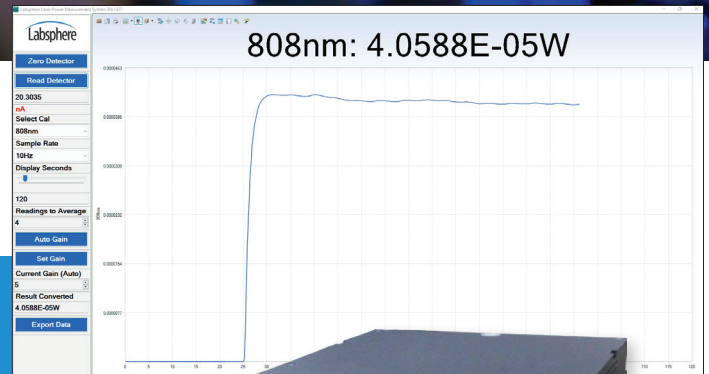
Continuous Signal Optical Power Meter and Systems

Most versatile and easy-to-use optical power meter. Combined with Labsphere UV-VIS NIR sensors, integrating spheres for:

- Laser power measurements
- Illuminance of light sources
- Luminance and radiance monitoring of integrating sphere sources
- Luminous flux of light sources
- Reflectance and transmittance

Labsphere's LFPA-8-1CH is an advanced optical power meter designed specifically for precise measurement of continuous low current signals originating from photodiodes for radiometry and photometry of light sources. With its exceptional features, such as low noise, high dynamic range, and outstanding resolution, it offers unparalleled performance. The LFPA-8-1CH is capable of accurately measuring signals ranging from picoampere (pA) to milliampere (mA) levels.

The LFPA-8-1CH is well-suited for a wide range of applications that involve measuring low currents in both laboratory and production line settings.



Features:

- RS232 based commands, cross platform ready
- Simple one page software to set all the parameters and read results
- Text based calibration file for easier customer modification

Customer enabled calibrations features:

- Dark noise subtraction by software
- Display duration and scans to average can be set by user

Complete your laser measurement solution by pairing the LFPA-8-CH1 with any of Labsphere's versatile Laser Power Measurement Spheres

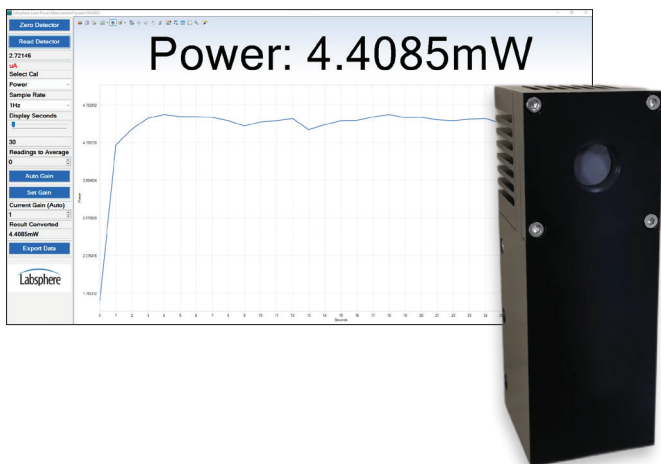


Laser Power Measurement Spheres and Sensors

Designed to excel in beam power measurement, Labsphere's laser power measurement spheres and sensors establish a dependable and precise methodology for quantifying the overall power emitted by a collimated or diverging laser source. These spheres are uniquely tailored for laser-oriented applications, providing an optimal means to gauge the total power from an optical beam of coherent light. The sphere's distinctive geometry ensures that beam power assessments remain unswayed by beam polarization and are impervious to beam alignment fluctuations.

Our laser power measurement spheres and sphere sensors provide options for sphere size and coating which are determined by the test laser power levels, the sphere optical detectors which are dictated by the test laser wavelength, and spectral responsivity calibration of the range of the optical detectors.

Thermopile Meter



Labsphere's thermopile meter is a state-of-the-art instrument designed to accurately measure optical power with a spectrally flat response from 0.19 μm to 20 μm . It utilizes a thermopile sensor, which is composed of multiple thermocouples meticulously integrated to provide exceptional sensitivity and precise measurements from 10 mW up to 35 W. This broad spectral range and power range is ideal for laser research and development, real-time monitoring for critical applications of lasers and laser-based instruments, and laser beam positioning and power optimization.

Value:

- Ensure comprehensive power collection from a laser, regardless of divergent angle or polarization
- Efficiently attenuate high power to avert sensor saturation
- Incorporate the second detector port for spectral monitoring or expanded wavelength coverage
- Mitigate errors linked to the non-uniform response of sensor active areas in their bare state

Applications:

- CW and pulse measurements of laser products
- Lab and production testing
- Lens alignment
- Laser power quality assessment

OEM and PRODUCTION TEST SUPPLIER

Maximum Value with High Quality and Efficiency



Consultive Approach

Work with our team of technical consultants to document your market, user, and design requirements. Together we'll define the scope of your project and illuminate the unknowns for a successful product launch.



Rapid Prototyping

We understand that a successful product launch is dependent on meeting project deadlines and design requirements. With our in-house manufacturing capabilities we will work with you to rapidly prototype and iterate on your product design.



Innovative Design

Our industry leading project managers will review your project requirements and work closely with you in every step of the design phase. From concept development to build and test documentation, our team is dedicated to your product's success.



Flexible Manufacturing

From alpha and beta builds to pilot production runs, our OEM model is optimized to meet your time to market, resiliency, and end market requirements.



Scalable Manufacturing

As your project evolves with the market, our OEM team is here to support and sustain your product throughout its lifecycle with a dedicated technical consultant at every step of the way. We continually enhance our capabilities by investing in a focused portfolio and people.

Let's Connect: www.labsphere.com