

# LFPA-8-1CH High Precision Optical Power Meter

**Low noise, high dynamic range,  
and outstanding resolution**

Labsphere's LFPA-8-1CH is an advanced optical power meter designed specifically for precise measurement of continuous low current signals originating 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 a single-channel optical power meter that can seamlessly integrate into instrument rack systems. It offers the convenience of USB power, eliminating power frequency interference concerns. To facilitate programming, the LFPA-8-1CH provides a user friendly programmable software interface and control as well as an API and serial commands. Users have the flexibility to manually set gain or opt for automatic gain adjustment based on their specific requirements and add calibration factors specific to the application.

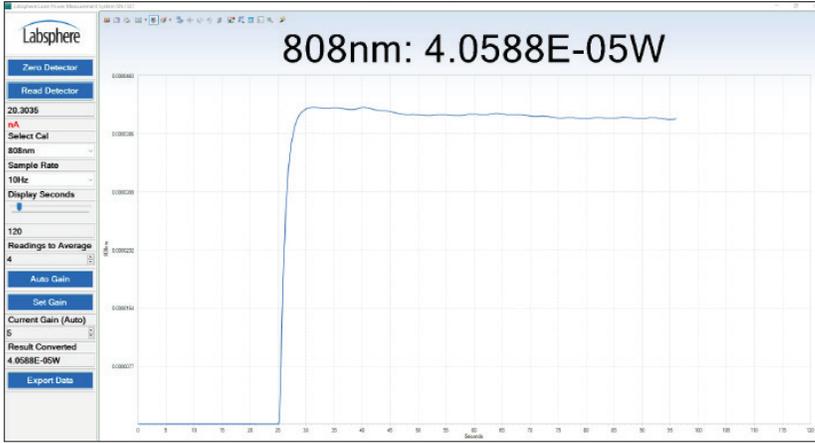
The LFPA-8-1CH is well-suited for a wide range of applications that involve measuring low currents in both laboratory and production line settings. It proves particularly valuable when used in conjunction with a Labsphere integrating sphere radiometer and photometer system. This combination enables the LFPA-8-1CH to accurately measure laser power and the radiance or luminance output of the sphere source, making it an excellent choice for such measurements and monitoring tasks.



## Applications:

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

# User Interface



Example of use for Laser Power Measurement

- 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
- Dark noise subtraction by software
- Display duration and scans to average can be set by user
- If you need customized software, talk to us

## Ordering Information and Specifications

<b>Model Number:</b>	<b>LFPA-8-1CH</b>
<b>Order Number:</b>	<b>LAS-00129-005</b>
<b>Bandwidth:</b>	~ 30 Hz (Range Dependent)
<b>Range Specifications:</b>	
Gain	Resolution Accuracy (%ordg + offset)
< ± 1.5 nA	50 fA 1% + 500 fA
± 1.5 nA ~ ± 15 nA	500 fA 0.5% + 5 pA
± 15 nA ~ ± 150 nA	5 pA 0.2% + 50 pA
± 150 nA ~ ± 1.5 µA	50 pA 0.15% + 500 pA
± 1.5 µA ~ ± 15 µA	500 pA 0.15% + 5 nA
± 15 µA ~ ± 150 µA	5 nA 0.15% + 50 nA
± 150 µA ~ ± 1.5 mA	50 nA 0.15% + 500 nA
± 1.5 mA ~ ± 15 mA	500 nA 0.15% + 5 µA
<b>Ranging:</b>	Auto and Manual
<b>Typical RMS Noise:</b>	0.2 pA
<b>Linearity Error:</b>	<0.5%
<b>AD Bits:</b>	16 bit
<b>Buffer:</b>	None
<b>Read Frequency:</b>	DC-10 Hz
<b>Compatible Detectors:</b>	Silicon Photodiode, Ge Photodiode, InGaAs Photodiode
<b>Inputs:</b>	Single Channel
<b>Input Connection:</b>	BNC Coax
<b>Power:</b>	USB, <500 mW
<b>Communication Interface:</b>	USB 2.0
<b>Operating Systems:</b>	Windows 10, MAC and Android. LLPL software Windows only
<b>User Interface:</b>	Windows Software UI
<b>Software (included):</b>	Labsphere Laser Power Measurement System Software
<b>Software Part Number:</b>	LAS-00366-000
<b>Programming:</b>	RS232 Commands
<b>Operating Environment:</b>	10°C ~ 30°C RH<90%
<b>Dimensions:</b>	11.8 in (300 mm) L x 8.26 in (210 mm) W x 3.5 in (90 mm) H
<b>Weight:</b>	2 kg