PowerSense™ Optical Power Meter

High-Speed, Compact, Wide-Dynamic-Range Optical Power Meter

Key Features

- Widest dynamic range with a single detector head (1 nW to 20 W)
- Integrated detector head and power meter in a single compact enclosure
- Multiple models available covering a broad spectral range, across 200 nm to 8 μm
- Fast read-out speed of typically 100 readings/second
- User-friendly control software package and programming platform via USB connection to PC
- Customisable for OEM applications

Applications

- Laser diagnostics for scientific applications
- Laser maintenance and installation
- Hand-held optical power inspection of a broad range of light sources
- Optical telecommunications

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PowerSense™ is a high-speed, compact power meter, capable of reading over the widest possible range of power levels, from 1 nanoWatt to 20 Watts, using a single detector head combined with a detachable attenuator.

PowerSense™ is offered for different spectral ranges, covering 200 - 1100 nm and 800 - 1800 nm as standard products. Deep UV (from 25 nm) and longer infrared (to 8 μm) versions are available by special request.

The photodiode detector and electronics have a milisecond level response time. Readings are sent to a PC over the High-Speed USB interface. Approximately 100 transfers/second are achieved using standard USB settings.

This is a NIST calibrated optical power meter providing < 2% measurement uncertainty.

PowerSense™ 's small footprint and low weight, render it a very portable devide. The product is ideal for real time monitoring of optical power generated by any light source, including lasers. It can be used in scientific applications, laser maintenance and installation or as a hand-held device for optical power inspection. The product has M4 and 8-32 threaded holes in its base to allow for mounting onto standard optical posts. The attenuator option has a variable iris which can be used to reduce back-reflected light. An optional optical fiber input can also be used with the system.

Specifications[1]

View of PowerSense™ with Attenuator

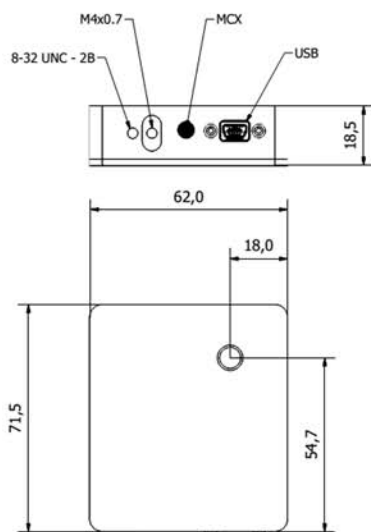| Characteristics	PowerSense™ head only	PowerSense™ with Attenuator-type L	PowerSense™ with Attenuator-type H
Input Aperture	8 mm	6 mm	6 mm
Maximum Power	1 mW	1 W	20 W
Resolution	60 pW	60 nW	1.2 μW
Size (W x L x H)	18.5 x 71.5 x 62.0 mm (0.73x 2.81 x 2.44 inch)	58.1 x 89.0 x 78.2 mm (2.29x 3.50 x 3.08 inch)	58.1 x 89.0 x 78.2 mm (2.29x 3.50x 3.08 inch)
Wavelength Range (Default option)	UV-VIS: 200 – 1100 nm NIR: 800 – 1800 nm		
Wavelength Range (Available on request)	Ex-IR: 900 – 2100 nm MIR: 1 – 5 μm MIR+: 3 – 8 μm DUV: 25 – 250 nm		
Readout Speed	100 reading/second via USB. Display (Optional)		
Detector Type	Low-noise photodiode		
Interface	USB2.0 with Windows Graphical User Interface and driver software. For Linux drivers, please contact Radiantis®		
Input Configuration	Free-space (Default) Fiber input (Optional)		

Footnotes

[1] Specifications are subject to change without notice

PowerSense™ Dimensions head only

Dimensions in mm

PowerSense™ Dimensions with Attenuator-types L and H

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