OP508

Fiber Optic Power Meter

OptoTest
Test Solutions for Fiber Optics

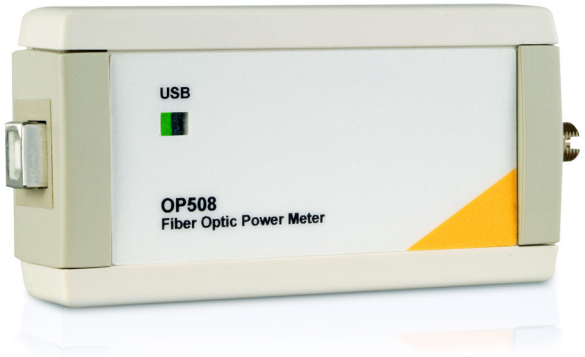
Overview

Fiber Optic Power Meter Module

The **OP508** was specifically designed as a cost effective solution for measuring, monitoring and logging insertion loss or power fluctuations. It is a small (4”x2”x1.25”) portable module designed to minimize movement and bending of the reference and test cables. This results in stable, accurate and repeatable measurements.

The **OP508** is offered with a choice of 1mm or 3mm InGaAs, 2mm High Power InGaAs, or 3mm Silicon detectors; and most common connector options (FC, ST, SC, LC, etc...). It comes with a fixed optical interface allowing for a wide variety of applications.

The USB-powered module connects directly to the computer. OptoTest provides drivers and applications that allow the user to perform common measurement tasks such as EXCEL data logging or time-stamped stability measurements.



Model OP508 Fiber Optic Power Meter

Features

- Broad wavelength spectrum
  - InGaAs: 830nm to 1700nm
  - Silicon: 400nm to 1100nm
- Measurement range
  - InGaAs: +6dBm to -72dBm
  - Silicon: +3dBm to -65dBm
- Relative accuracy of 0.02dB*
- Measurement display resolution down to 0.001dB
- Fast data acquisition rate without compromising measurement accuracy
- Variable sampling rate via software
- Integrated temperature monitoring eliminates the need for an additional temperature sensor during long term stability tests

USB-powered and controlled

** Loss less than 10dB*

Applications

Stability and Long Term Loss Characteristic of Optical Components

Bundled with the **OPL-5** Optical Power Meter Software, the **OP508** is a cost-effective solution for measuring the stability of passive fiber optic components and optical sources.

In order to record accurate, long term stability test results, it is critical to monitor the ambient temperature. The **OP508** has an on-board thermometer to record this data without any additional equipment.

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SPECIFICATIONS

OptoTest
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Optical Power Meter	1mm InGaAs	3mm InGaAS	5mm InGaAs	10mm InGaAs	3mm Silicon
Measurement Range	+6dBm to -72dBm at 1490nm	+3dBm to -72dBm at 1490nm	0dBm to -65dBm at 1490nm	0dBm to -55dBm at 1490nm	0dBm to -65dBm at 980nm
Wavelength Range	850nm to 1650nm				400nm to 1100nm
Selectable Wavelength	Standard wavelengths (850nm, 980nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm)				Standard wavelengths (650nm, 850nm, 980nm)
Measurement Resolution (Display)	0.001dB				
Absolute Accuracy	±0.25 dB at calibration conditions for all NIST traceable wavelengths				
Measurement Linearity (Relative Accuracy)					
Deviation ± 0.05dB	+3dBm to -65dBm at 1490nm	0dBm to -65dBm at 1490nm	0dBm to -55dBm at 1490nm	0dBm to -45dBm at 1490nm	0dBm to -55dBm at 980nm
Deviation ± 0.01dB	<10dB power variation	<10dB power variation	<10dB power variation	<10dB power variation	<10dB power variation

Return Loss	1310nm/1550nm	1310nm/1490nm/1550nm/1625nm	850nm/1300nm
Source Wavelength	1310nm, 1550nm	1310nm, 1550nm, 1490nm, 1625nm	850nm, 1300nm
Calibrated Measurement Range	-10dB to -80dB	-10dB to -80dB	-10dB to -58dB
Measurement Linearity	±1dB (-12dB to -72dB)	±1dB (-12dB to -72dB)	±1dB (-10dB to -45dB)
Distance Range	100 meters (standard)/ 2500 meters (Rep Rate adjusted)	100 meters (standard)/ 2500 meters (Rep Rate adjusted)	100 meters (standard)/ 2500 meters (Rep Rate adjusted)

Insertion Loss	1310nm/1550nm LASER	1310nm/1490nm/1550nm/1625nm LASER	850nm/1300nm LED
Source Center Wavelength	±30nm from nominal	±30nm from nominal	±30nm from nominal
Source Bandwidth	<10nm	<10nm	<140nm
Internal Fiber	9/125µm (SMF28)	9/125µm (SMF28)	50/125µm, 62.5/125µm, 105/125µm
Launch Condition	N/A	N/A	Available upon request
Output Power	Typical -1.5dBm	Typical -2.5dBm	-18dBm: 62.5/125µm
Source Stability*	±0.02dB	±0.02dB	±0.02dB

** Over 1 hour with a max. change of 1°C*

Laser Classifications

All **OP930 Insertion Loss and Return Loss Test Sets** utilize a **Class I Laser Source**. Unless otherwise noted, all **OP250**, **OP715**, and **OP750** source units with internal laser sources utilize a **Class I Laser Source**. Unless otherwise noted, all **OP815** and **OP850 Insertion Loss Test Sets** with internal laser sources utilize a **Class I Laser source**. All **OP280 Visual Fault Finder** units utilize a **Class III Laser Source**.

OptoTest strongly suggests that all necessary precautions be taken whenever any Class I or Class III laser source is used.

Specifications are subject to change, please confirm specific performance characteristics of the product at the time of ordering.
All specifications are valid within temperature range of 18°C to 24°C unless otherwise noted.
For additional specifications please contact OptoTest.

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