



Overview

Fiber Optic Power Meter Module

The **OP510** was specifically designed for applications where **cost effective solutions** for measuring, monitoring and logging of insertion loss or power fluctuations are needed. The OP510 is a small (4"x2"x1.25") **desk friendly** module designed such that minimal movement and bending of the reference- and test cables is necessary. This results in stable, accurate and repeatable measurements.

A unique feature of the OP510 is the **16 position bargraph** that displays the user the approximate power absolute or relative power level. The **TEST** button on the module allows the user to the reference function or to trigger a computer based measurement.

The OP510 is offered with various detectors with the commonly used **5/8" adapter system** or fixed optical interfaces. These options cover wide variety of applications.

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



Model OP510-IN-FC
InGaAs Detector with fixed FC/PC Interface

- High precision fiber optic power measurement

Extended optical power measurement range, depending on the selected detector **+10dBm...-80dBm** for InGaAs detector, **+6dBm...-75dBm** for Silicon detector.

Wide wavelength range **830nm ... 1700nm** (InGaAs), **580nm ... 1080nm** (Si).

Great measurement resolution of **0.001 dB**

Tight linearity specifications: **+/- 0.05dB**

Selectable sample rate selected by application : **1 sample/sec ... 100 samples/sec**

- Integrated ambient temperature tracking
- Pass / Fail display with user defined limits
- Turnkey measurement solutions

- USB Powered, plug&play data acquisition

The OP510 is a bus powered, low power (<100mA) USB device. With the supplied drivers data can be transferred to and from the module at 0.2Mb/s.



The OP510 measures the ambient temperature (°C or °F) within **-10°C ... +55°C** at a resolution of **0.1°C**. This feature eliminates the needs for an external temperature sensor during long-term stability testing.

Applications

Stability- and Long-term Loss Characteristic of Optical Components

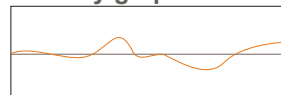
Bundled with the **OPL5 Optical Power Meter Software** the OP510 is a cost-effective system for measuring stability of passive fiber optic components and optical sources. Monitoring the ambient temperature is a necessity, minor fluctuations can influence the outcome of the measurements. The OP510 measures and reports ambient temperature eliminating the need for an external monitor.

Production Testing of Connectors and Components

In a production environment where the insertion loss of cables or other components is measured the OP510 offers a cost effective solution. The module offers a programmable **Pass/Fail** indicator indicating the result of the IL measurement to the user instantly. The OPL5-Pro Component Test Software has the capability to log the test data, partnumber, and serial number directly into spreadsheets.

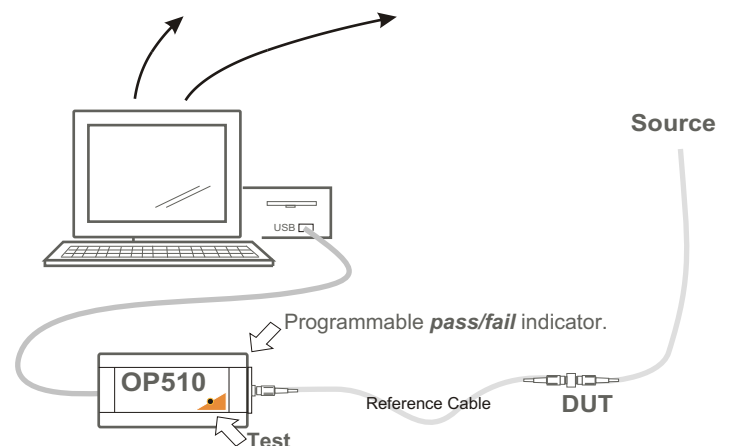
The **Test** button on the module allows the user to trigger measurements on the desk.

stability graph



spreadsheet data

#12A	0.15dB	1310nm
#12B	0.12dB	1310nm
#16A	0.55dB	850nm



The **Test** button executes a reference or it is used to command the computer to advance to the next measurement.

	OP510-IN-XX	OP510-SI-XX	OP510-IN1	
Detail Specifications	Measurement Range	+6dBm..-75dBm	+6dBm..-75dBm	+10dBm..-80dBm
	Wavelength Range	830nm .. 1700nm	580nm .. 1080nm	830nm .. 1700nm
	Selectable Wavelength	16	16	16
	Calibration Points ¹⁾	850/1310/1550nm	630/850/980nm	850/1310/1550nm
	Measurement Resolution	0.001dB	0.001dB	0.001dB
	Measurement Linearity, Relative Accuracy ²⁾	0.05dB	0.05dB	0.05dB
	Power & Data Interface	USB powered, less than 100mA, USB 1.1 compatible data rate		
	Operating Temperature Range	-10 °C ... 55 °C (32°F ... 131°F)		
	Mech Dimension	105x55x30 mm (4 x 2 x 1.25 inch)		
	Optical Interface	fixed optical interface FC/ST/SC		5/8" Adapter

All specifications are valid within temperature range of 18 °C to 24 °C unless otherwise noted.

1) Calibration against NIST traceable standard at -10dBm. Additional wavelength points upon request.
 2) Linearity for loss <5dB and absolute power within 0dBm and -60dBm

NOTE: Specifications are subject to change, please confirm specific performance characteristics of the product at the time of ordering.

OP508



OP508

Fiber Optic Power Meter


Overview

Fiber Optic Power Sensor Module

The **OP508** was specifically designed for applications where **cost-effective solutions** for measuring, monitoring and logging of insertion loss or power fluctuations are needed. The OP508 is a small (4"x2"x1.25") **desk-friendly** module designed such that minimal movement and bending of the reference and test cables is necessary. This results in stable, accurate and repeatable measurements.

The OP508 is offered with various detectors and connector styles with a fixed optical interface covering a wide variety of applications.

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



Model OP508-IN-FC
InGaAs Detector with fixed FC/PC Interface

Specifications

The **OP508** has similar performance as the OP510:

Optical power measurement range, depending on the selected detector **+6dBm..-65dBm** for InGaAs detector, **+6dBm..-60dBm** for Silicon detector.

Wide wavelength range **830nm ... 1700nm** (InGaAs), **580nm ... 1080nm** (Si).

Great measurement resolution of **0.001 dB**

Tight linearity specifications: **+/- 0.05dB**

Order Information

OP508 with fixed optical interface

OP508 -

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SI Silicon Detector

IN InGaAs Detector

ST

SC

FC

(other upon request)

DS510&508RevA3