

Features

- Two High Sensitivity Power Meters
 < -85 to +10dBm
 0.001dB Resolution
 1270 to 1625nm
- Stable C-band Laser
 Variable Attenuator
- USB powered
 USB / Ethernet interface
 Compact Package
 Low Power

Overview

The Dual OEM version of the Optical Signal Test Set (OSTS) combines two high dynamic range optical power meters, a variable attenuator, and a high stability laser source.

The unit is able to measure optical signals below -85dBm with 0.001dB resolution and below -100dBm at reduced accuracy. The OEM version is offered as a bare CCA with USB and Ethernet ports.

Typical Performance



-85dBm with a 1dB step



-90dBm with a 1dB step



Optical Signal Test Set Dual OEM High Performance Power Meter, Laser, and VOA

Data Sheet 2/17/2023

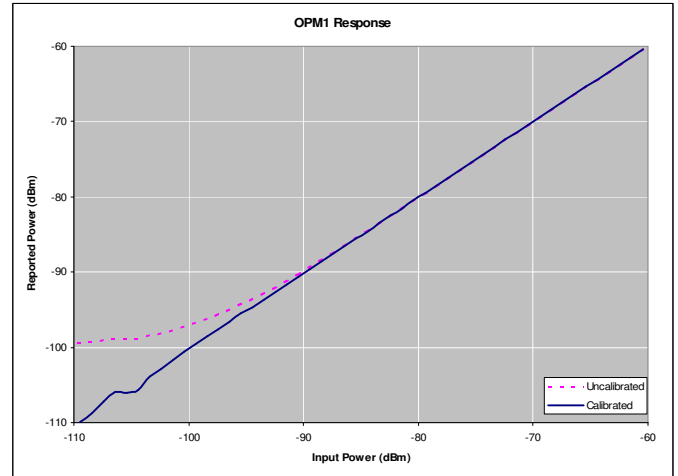
100560A



-95dBm with a 1dB step



-100dBm with a 1dB step



Typical Low Range Power Meter Response

Custom Programming

The Optical Signal Test Set uses either USB or Ethernet along with a straight forward communication protocol making custom user application development straight forward.

Ordering Information

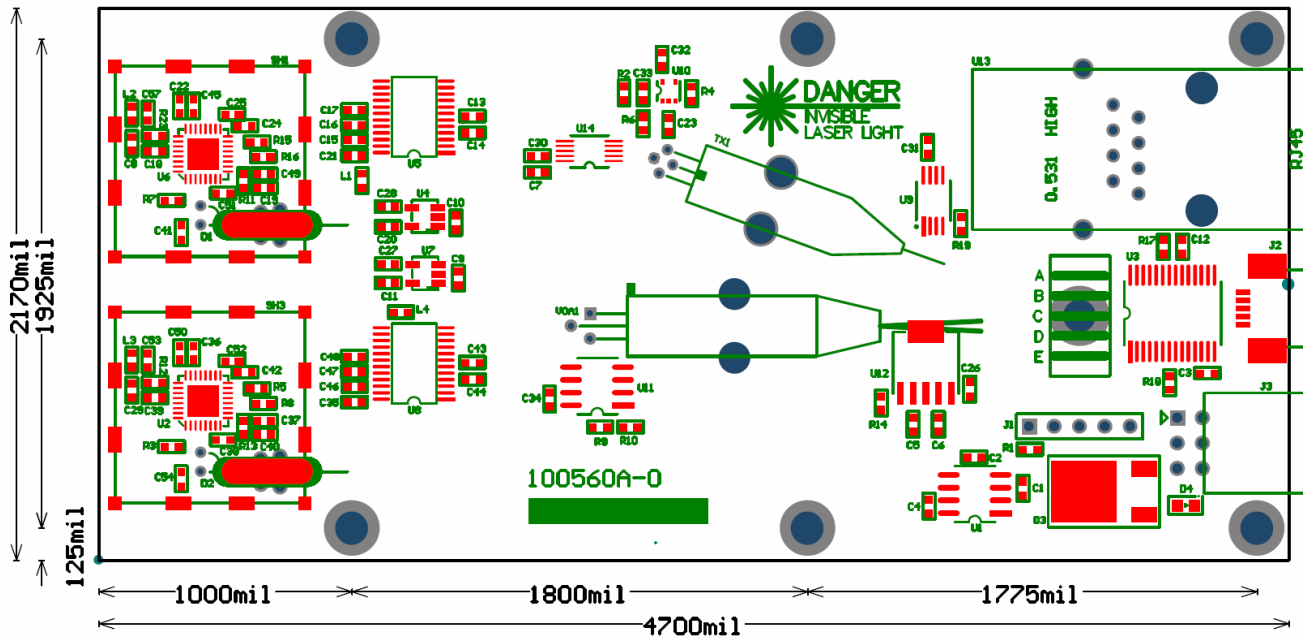
Part Number	Description
100560A- λ	Optical Signal Test Set Dual OEM CCA, where λ is the laser wavelength

Specifications

Parameter	Units	Typical Specifications
Power Meter Dynamic Range	dBm	-100 to +10
Power Meter Resolution	dB	0.001
Power Meter Sample Rate	SpS	10 to 50 (programmable)
Power Meter Wavelength	nm	1260 to 1625
Laser Wavelength Tolerance	nm	+/-4
Laser Output Power	dBm	0 to -10 in 1dB steps
VOA Insertion Loss	dB	2 max
VOA Attenuation Range	dB	30 to 60dB in 0.1dB steps
VOA Wavelength	nm	1528 to 1607
Fiber Interface		Single mode, LC/UPC pigtailed
Computer Requirements		Windows 10 with USB
Power		5VDC, 1.2W (Ethernet), 0.9W (USB)
CCA Dimensions		4.7" x 2.17" x 0.7"

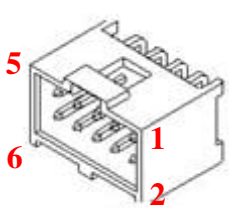
Mechanical and Shielding

The power meters are very susceptible to stray light and electrical and magnetic fields at low optical power levels. Small changes in ambient fields can affect the performance and calibration at light levels below -80dBm. The six 0.13" mounting holes are internally connected to power ground and for best performance, should be electrically connected to a metallic housing or shield which covers the CCA. Some experimentation may be required for optimal low power performance. In either case the power meters should be calibrated after the CCA and surrounding enclosure is in its final configuration. For an off the shelf shielding or bench test solution, the CCA will slide into Box Enclosures PN B1-120 extruded housing.



Electrical / Fiber Interfaces

The OSTs Dual OEM CCA can accept power from either the USB port or from the 6-pin connector (J3). The OSTs can be disabled by grounding pin 3 of the 6-pin connector reducing the supply current to approximately 10mA. The suggested mating connector is Molex PN 0901420006 and contacts 0901192111, or cable assembly PN 2196581064. Five fibers pigtailed, labeled A through E, make up the optical interface and exit over the USB connector via a strain relief feature described below.



J3 Pin	Description
5	+5VDC input
3	Pull to ground to shut-down
4,6	Ground
1,2	Not used (do not connect)

Fiber	Description
A	Laser output
B	OPM1 input
C	VOA output
D	VOA input
E	OPM2 input