

TWL-P-MM



DEVICE

Tunable Laser w/ Photonics Multimeter – Phoenix Series

OVERVIEW

The Optilab TWL-P-MM is a handheld photonics multimeter based on the Phoenix platform. Featuring a 7" touch display screen and a large capacity battery, the TWL-P-MM provides a convenient solution to monitor photonic conditions in both laboratory and field settings. The user can select one of the three options for an integrated light source at the time of ordering: a wavelength tunable laser in full C band or L band or a CWDM DFB laser with a limited tuning range. This multimeter not only detects the average input optical power, but can also analyze optical waveforms up to 100 kHz. Moreover, it comes with an electrical signal generator for quick O/E conversion test. FFT analysis is included. Contact Optilab Sales for more information.

FEATURES

- Optical Waveform Analyzer
- Integrated Tunable Laser Output
- Synthesized Electrical Wave Output
- Light Weight: < 5.5 lbs. (2.5kgs)
- 7" LCD touchscreen
- Wireless Control (Optional)

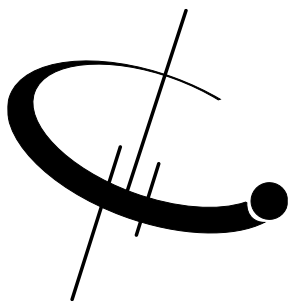
SOFTWARE

- Touchscreen Control – No PC Required
- Built-in Intuitive GUI
- Remote Control via USB or Z-Link

APPLICATIONS

- Photonics Circuit Diagnostics
- O/E Waveform Analysis
- FTTX Field Diagnostic





TWL-P-MM

SPECIFICATIONS

OPTICAL

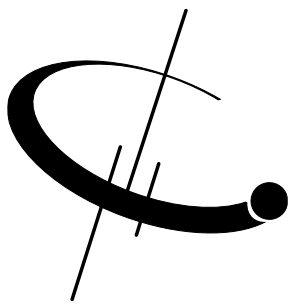
Tunable Laser

Laser Wavelength Detection	C-band: 1528-1565nm, L-band: 1568-1608
Wavelength Accuracy	± 1.5 GHz
Fine Tune Wavelength Resolution	0.08 pm (over any band)
Wavelength Stability	± 1 pm over 24 hours
Output Power Level	45 mW (+16.5 dBm) max.
Output Stability	0.02 dB over 8 hours
Laser Linewidth	< 10 KHz
Relative Intensity Noise	-145 dB/Hz
Side Mode Suppression Ratio	55 dB typ.
Polarization Extinction Ratio	20 dB typ.
Optical Isolation	30 dB min.
Fiber Type	PANDA 1550 PM Fiber
Optical Connectors	PM Narrow Key, FC/APC or Customer Specified

Multimeter

Wavelength Detection	1260 nm to 1620 nm
Input Power Range	-20 to +25 dBm
Frequency Range	DC to 100 kHz
Refresh Rate	1 sec
Fiber Type	SMF-28
Optical Connectors	FC/APC





TWL-P-MM

SPECIFICATIONS

CONTROL FUNCTIONS

Base Frequency Range	C-band: 196.1 THz to 191.5 THz, L-band: 191.1 THz to 186.4 THz
Channel Spacing	Grid Tuning (100 MHz to 3.28 THz), Gridless Tuning (10 MHz res.)
Channel Grid	1 to 192
Channel Setting Time	10 sec.
Output Power Adjustment Range	5 dBm to 16.5

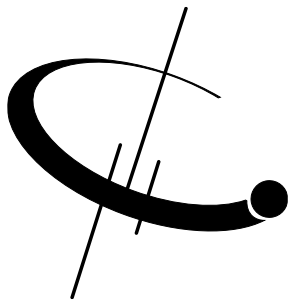
MECHANICAL

Operating Temperature	0 °C to +40 °C
Storage Temperature	-20 °C to +70 °C
Cooling	Passive
Dimensions (LxWxH)	290mm x 45 mm x 170 mm
Weight	< 2.5 kg
Housing	Injection Molded Aluminum

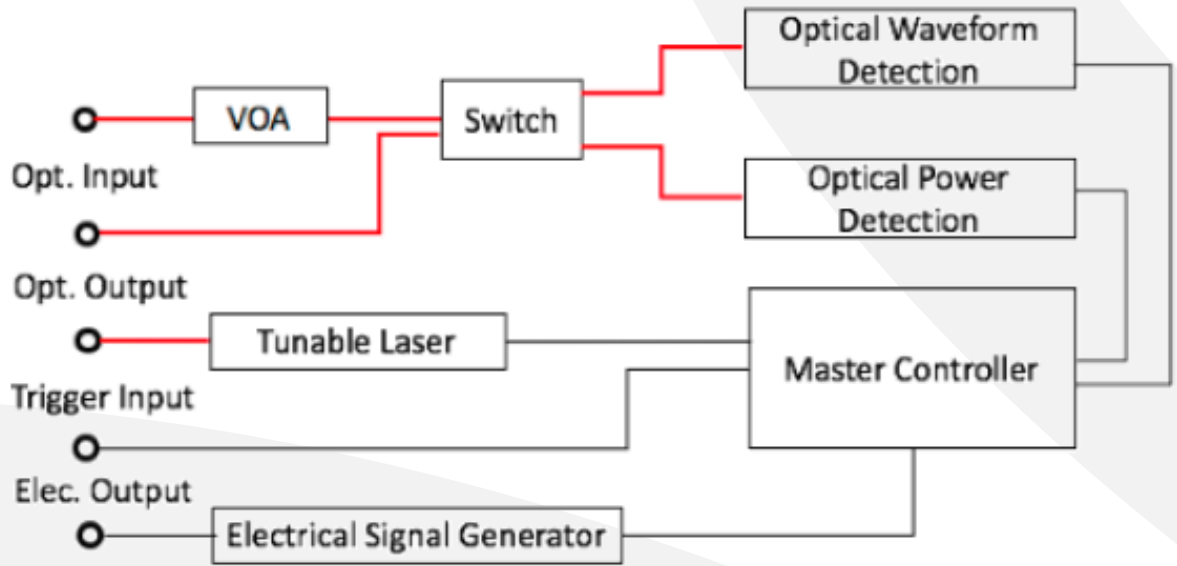
ELECTRICAL

Power Supply	+5V DC External Power Adapter
Backup Battery	Lithium Ion
Display	7" LCD Touchscreen
Battery Life	3 hours Operation
Software	GUI Interface

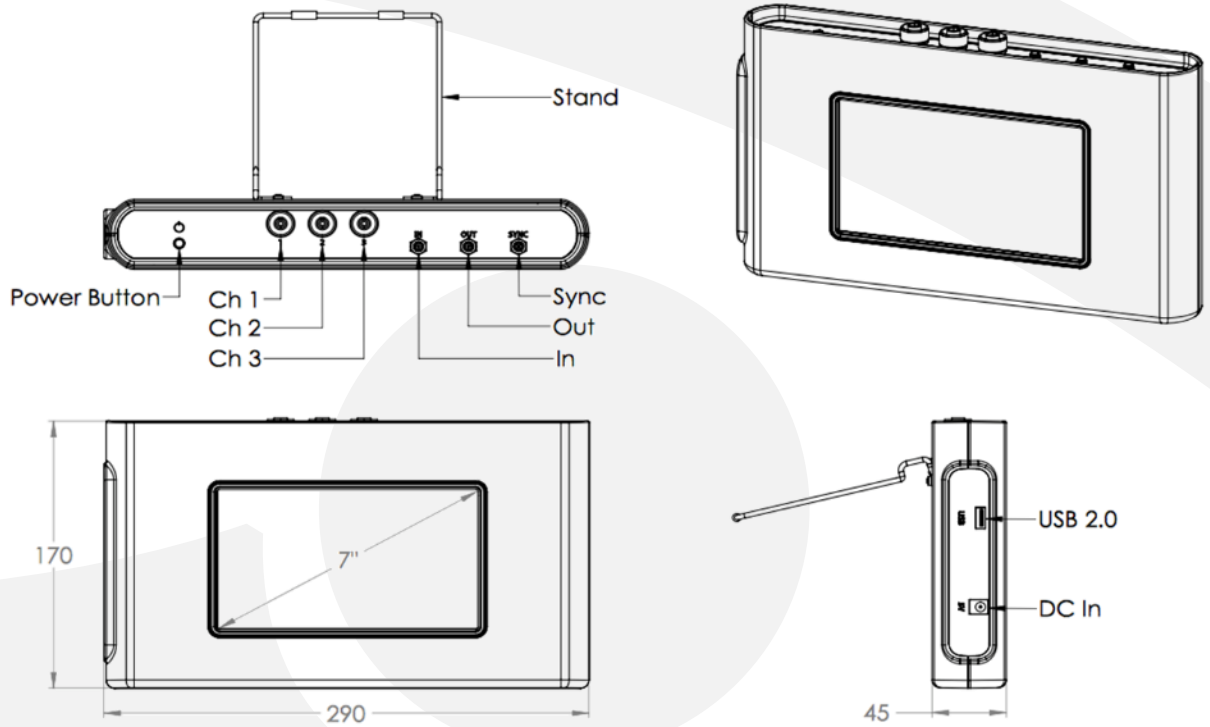




TWL-P-MM

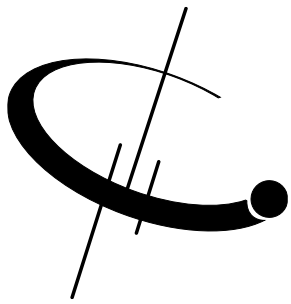


FUNCTION
DIAGRAM



MECHANICAL
DRAWINGS



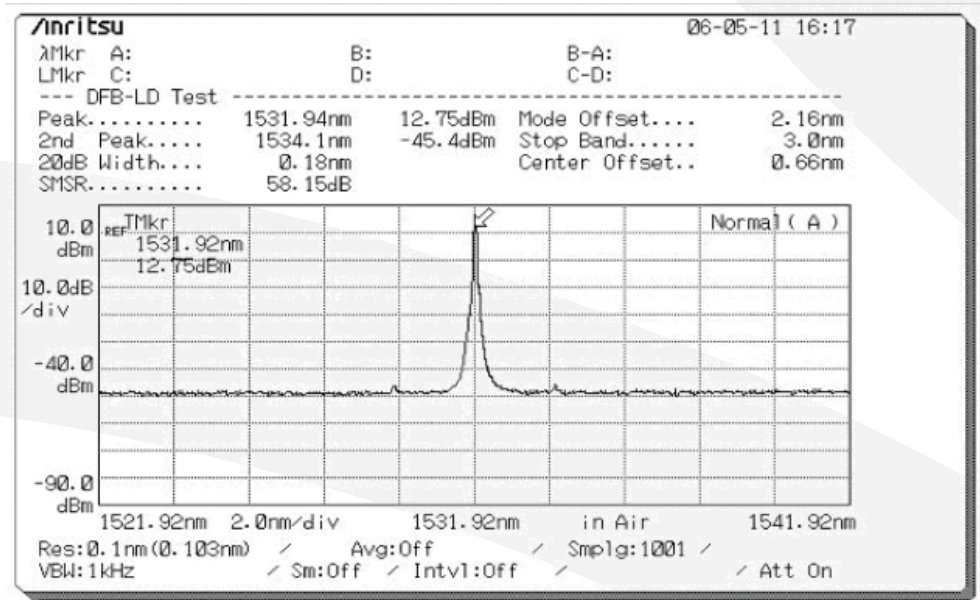


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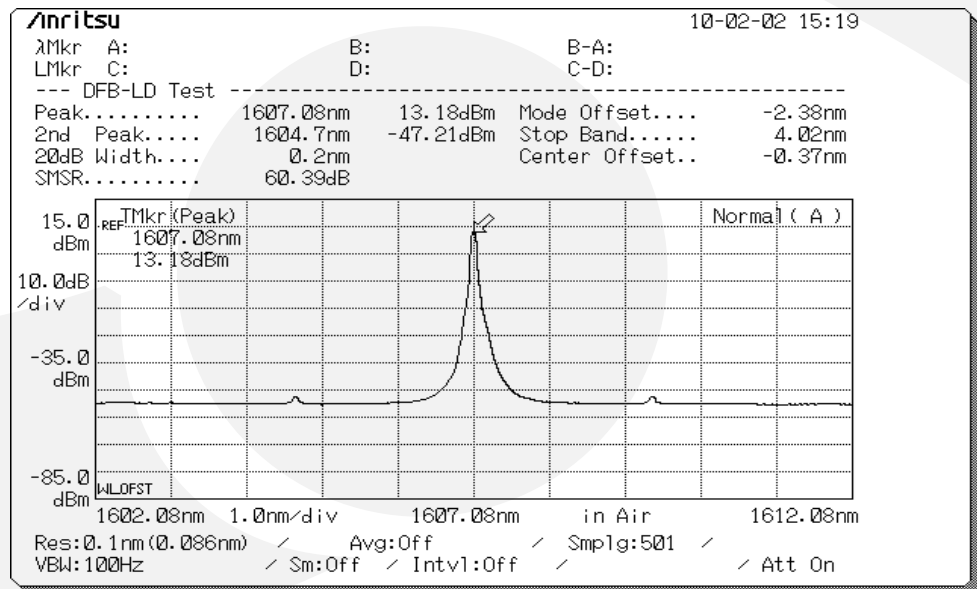
ADDITIONAL INFORMATION

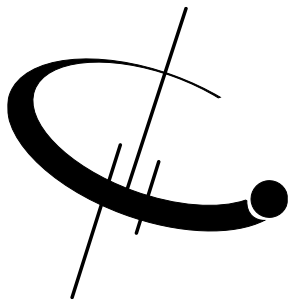
TWL-P-MM has built-in wavelength locker ensuring a precise wavelength setpoint within 10 pm over a 15 year life time of the device. Utilizing Telcordia qualified components, TWL-P-MM tunable laser offers exceptional reliability and can provide years of excellent, worry-free performance.

C-BAND CHANNEL
(1531.91 NM)



L-BAND CHANNEL
(1607.08 NM)





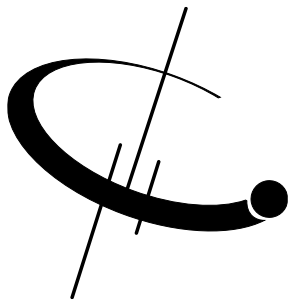
TWL-P-MM

SCREENSHOT

The screenshot shows the 'TWL CW Setting' interface. It features a 'Zoom' button on the top left and a 'Back' button on the top right. The interface is divided into two main sections: 'Laser' and 'Coherent Mode', both with 'OFF' buttons. Below these are three input fields for 'Set Power' (-1, -0.1, -0.01) and three for 'Set Wavelength' (-0.1, -0.01, -0.001). The current 'Set Power' is 00.00 dBm and 'Set Wavelength' is 1565.493 nm. A horizontal bar at the bottom shows a range from 05.99 dBm to 14.50 dBm.

The screenshot shows the 'Optical Power Meter' interface. It features a 'Zoom' button on the top left and a 'Back' button on the top right. The interface displays 'Input Power' as -27.34 dBm and 'Detected Power' as -27.34 dBm. There are buttons for 'dBm/mW' and 'CAL'. On the right, there is a 'VOA Stage' section with buttons for -00 dB, -10 dB, and -20 dB. At the bottom, a diagram shows a signal path from a 'PD' (Photodiode) through a 'VOA' (Variable Optical Attenuator) with a -20 dB setting, resulting in a detected power of -27.34 dBm.





TWL-P-MM

SCREENSHOT

Digital Synthesizer Back

Output Mode: Disable Sine Triangle Square Stop

Frequency: 0010.000KHz +1Hz +10kHz +100kHz
-1Hz -10kHz -100kHz

Scan Range: 0000.000KHz - 0000.100KHz
Step size: 0000.001KHz Start Scan

Opt/Elect

VOA

Return

1Vrms/div 32ms/div

