

FMM-50

Comprehensive Optical Multifunction Meter

Lowest Price
Most Valueable

6 in 1



- § Auto Return Loss Meter
- § Auto Loss Meter
- § 5 Light Sources
- § Power Meter
- § Visual Fault Locator
- § Fiber Length Meter

Key Features

- Fast Start-up:** Take few seconds to start the unit.
- Fast Test:** Complete auto measurement of IL, ORL and Fiber Length in seconds
- 6-in-1 Solution:** Combined with 6 instruments covering comprehensive functions
- All inclusive:** No need to worry what to choose and not to choose from long option list any more.
- FTTx-ready:** The standard package allows for the testing of PONs network at 1310 nm, 1490 nm and 1550 nm recommended by the ITU-T (G.983.3).
- Unbeatable:** The most affordable and the best performance-to-price ratio in the market – the best deal is guaranteed
- USB Ports:** USB Type A: USB memory drive – unlimited result storage capacity via USB memory sticks Easy and quick data transfer of stored measurement results, keyboard and mouse device, etc
USB Type B: Connect a USB cable for data transfer between the unit and a computer

Built for Fiber-Optic Test:

- Lightweight, rugged, flexible for field testing
- High resolution 3.5in color display
- Support touch screen
- 128M internal memory and unlimited data storage via USB stick.
- Data management and report generation
- User-friendly keypad designed for easy to use
- Remote control - the unit can be controlled with RJ45 Ethernet port
- User-configurable pass/fail thresholds for error-free testing

Desired Light Sources

- 3 singlemode wavelengths 1310nm, 1490nm and 1550nm – ITU-T G.983.3 recommended wavelengths for passive optical networks (PONs) – FTTx ready.
- 2 multimode wavelength 850nm and 1300nm
- Test multi-wavelengths simultaneously

Highest performance-to-price ratio

- Most integrated optical test functions
- Super test precision
- Lowest cost
- Highest performance-to-price ratio for customers

Bi-directional Test

- The most beneficial feature to customer is FMM-50 supports bi-directional testing. It can test the insertion loss and optical return loss at both directions at same time.

Remote Control

- This is one of the unique features of FMM-50. FMM-50 can connect to PC or LAN access via RJ45 Ethernet port. The unit can be controlled from PC or over local Area Network. This is a very convenient tool to many customers.

Comprehensive Fiber-Optic Testing

FMM-50 handheld optical multifunction meter combines 6 instruments, with highly integrated features and accurate test results, fully satisfies installation, operation and maintenance for fiber optic network.

Bi-directional Auto IL and ORL Test

Optical insertion loss and return loss test can validate whether fiber and linker are installed correctly.

This measurement requires the tester sending light signal and measuring light signal on the same port at same time.

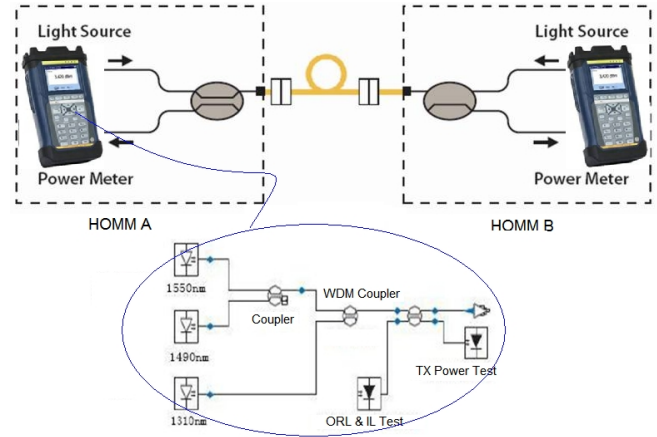
This measurement needs two testers at both ends of fiber link to synchronize first before starting test.

This measurement needs two testers capable to communicate through fiber link in order to send and receive commands and send test result from one side to another.

FMM-50 meets all the criteria. FMM-50 supports stable single mode light sources (1310nm, 1490nm and 1550nm) and multimode light sources (850nm and 1300nm). Each fiber end is placed with FMM-50 – ready for multi wavelength insertion loss and ORL test.

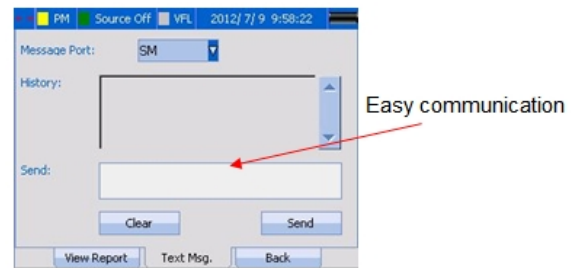
Unit A as master unit sends request information to the Unit B.

Unit B as a slave unit follows all the instruction from Unit A. After test completes, the test results of A-B and B-A directions will be saved in Unit A and unit B respectively or all the results can be collected at unit A or unit B. Simultaneously the fiber length is measured as well.



Call Function (Instant Messenger)

Communication is very important part in this operation. FMM-50 provides an IM tools like MSN/ICQ. Two sets of FMM-50 can communicate each other using txt format message – an easy communication.



Troubleshooting Test

FMM-50 locates and identifies the source of problem along the optical fiber link section by section. We should test optical power to ensure that sufficient power is delivered in the network, and perform VFL tests to locate the problems such as break or macro-bend etc.



Technical Specifications

Optical Power Meter

Detector	Ge
Connector Type *	FC/UPC
Measurement Range (dBm)	+10 to -60
Uncertainty	± 5 % ± 0.1 nW
Wavelength Range (nm)	780 to 1800
Display Resolution (dB)	0.01
Calibrated Wavelengths	850 1300 1310 1490 1550 1625 nm
Recommended Recalibration Period	3 years
Automatic Zeroing	Yes

Dedicated ORL (all SM Wavelengths)

ORL range(APC/UPC) (dB)	65/55
ORL uncertainty (dB)	± 0.5
Resolution (dB)	0.01

VFL

Emitter type	LD
Connector Type	2.5mm Universal
Wavelength	650nm
Output power	-6dBm

Light Sources

Wavelengths (nm)	1310 ± 20/1490 ± 20/1550 ± 20	850 ± 25/1300 ± 25
Emitter type	LD	LD
Connector Type *	FC/UPC	FC/UPC
Minimum output power (dBm)	-6	-6
Spectral width (nm)	≤ 5	50/135
Stability (8 hours) (dB)	± 0.2	± 0.2

Loss/ORL/Fiber Length

Wavelengths (nm)	1310/1490/1550	850/1300
Loss Range (dB)	60	40
Loss Precision (dB) End to End	0.15	0.15
Loss Precision (dB) Loopback	0.25	0.25
Fiber Length Measurement Range (km)	200	3
Fiber Length Measurement Uncertainty	± (10 m + 1 % x length)	± (10 m + 1 % x length)

General

Display	3.5" TFT LCD color and TOUCH screen
Data Storage	128M internal memory; USB port for external memory
Interface	USB Type A: USB memory drive, keyboard and mouse device, etc USB Type B: Connect a USB cable for data transfer between the unit and a computer RJ-45 port: Connect the unit to an Ethernet network.
Temperature	Operating: -10°C to 50°C Storage: -40°C to 70°C
Relative Humidity	0 to 95% (non-condensing)
Power Supply	Li-Ion batteries with AC/DC adapter
Battery Life	6 hours of continuous operation as per Bellcore TR-NWT-001138
Size (H×W×D)	80mm x 135 mm x250 mm
Weight	1.1kg

Ordering Information

Standard Package:

FMM-50 Main Frame	Includes: SM Light Sources (1310/1490/1550nm) MM Light Sources (850/1300nm) Optical Power Meter VFL
Connector Type*	FC/UPC
Li-Ion Battery	
AC/DC Power Adapter	
Power cord	
Disc with data management software	
Soft carrying case	

* other types of connector are available upon request