MOT-500 Mini OTDR series

Description:

MOT-500 series Optical Time Domain Reflectometer (OTDR) is an intelligent meter of a new generation for the detection of fiber communications systems. With the popularization of optical network installed in cities and countryside's, the measurement of optical network becomes short and disperses; MOT-500 is specially designed for that kind of application. It's economic, having outstanding performance.
MOT-500 is manufactured with patience and carefulness, following the national standards to combine the rich experience and modern technology, subject to stringent mechanical, electronic and optical testing and quality assurance; in the other way, the new design makes MOT-500 more smart and compact and multi-purpose.
Whether you want to detect link layer in the construction and installation of optical network or proceed efficient maintenance and troubleshooting, MOT-500 can be your best assistant.

MOT-500

Features:

- Integrated design, smart and rugged
- IP65 protection level, outdoor enhanced
- 7-inch anti-reflection LCD screen
- PON online test module (1625 nm) is optional
- MMF test module (850/1300 nm) is optional
- Support multi-language display and input

Application:

- FTTX test with PON networks
- CATV network testing
- Access network testing
- LAN network testing
- Metro network testing
- Lab and Factory testing
- Live fiber troubleshooting

Ready for all kinds of environment.

MOT-500 series OTDR is specially designed for tough outdoor jobs. IP65 protection level, lightweight, easy operation, low-reflection LCD and more than 12 hours working period make it perfect in field testing. Meanwhile, optional PCB board with water-proof coating helps MOT-500 series OTDR get better protection performance.

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What you need is all-in-one!

MOT-500 series OTDR is a highly integrated platform that features with four module slots, with a large 7-inch color screen (with a touchscreen option), a high-capacity Lithium-Ion battery, an optional microscope (through universal serial bus [USB] port), and built-in optical test functions, such as PON test module, visual fault locator (VFL), optional power meter and laser source, making it qualified in the installation, turn-up, and maintenance of FTTx/Access optical networks.

Main functions Multimode OTDR

In addition to standard single mode 1310/1550 nm, MOT-500 series OTDR supports multimode 850/1300 nm test mode for option to analyze multimode fiber network.

VFL (visual fault locator)

The VFL, available as a standard module in MOT-500 series OTDR, offers built-in 650 nm visual fault location on a FC/UPC connector.

PON ONLINE TEST

MOT-500 series OTDR uses 1625nm wavelength to scan and analyze the access point and proceed online testing with optical filter, and will not disturb the service.

PM (power meter)

MOT-500 series OTDR comes with optional built-in power meter that let technicians easily verify the presence of a signal.

LS (laser source)

MOT-500 series OTDR comes with optional built-in laser source through OTDR1 Port that let technicians easily verify the total loss of the local network with a power meter.

FM (fiber microscope)

The optional fiber inspection probe facilitates the inspection before the connection. MOT-500 series OTDR offers this capability through a USB port connection, which allows quick and easy inspection of connector end faces for contamination and also enables it capture and store the image.

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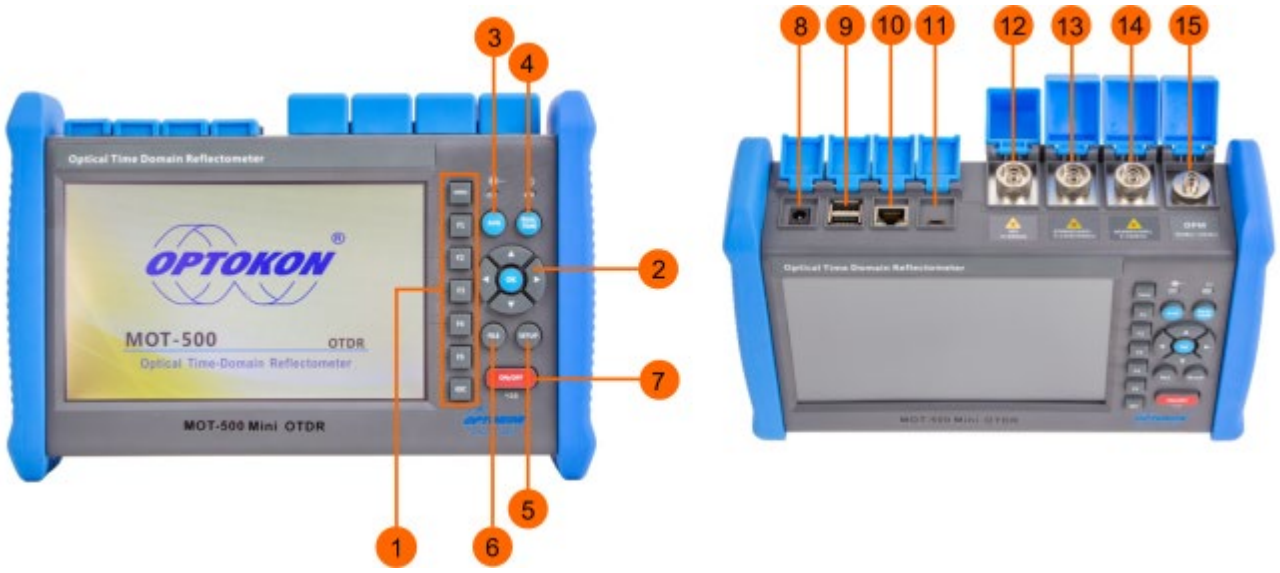
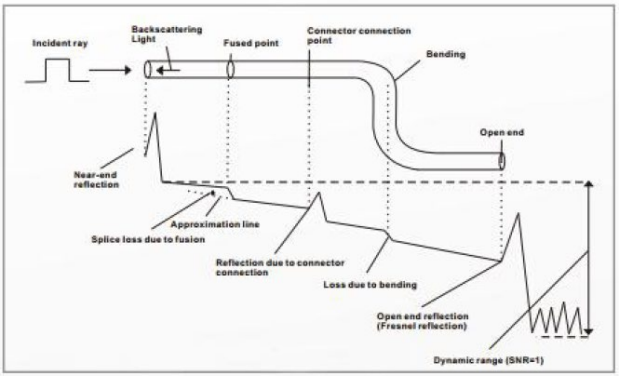


1. Menu selector button
2. Navigate button
3. AVG test button
4. RT test button
5. Test setup button
6. File management button
7. Power switch
8. Charging port
9. USB (A type) port
10. RJ-45 port
11. USB (B-type port
12. VFL port
13. OTDR1 port
14. OTDR2 port (optional)
15. PM port (optional)

Humanized Test Interface

MOT-500 series OTDR could display Splice loss, Connector loss, Fiber attenuation, Reflection of points, Link optical return loss and distance to fiber events etc. With test information in a smart way, user could get detailed information immediately.

Simplified display style and structured menus help effective in reducing the time of study.



FTTH test within PON networks

MOT-500 series OTDR's models T43F, is dedicated to the testing of PON network maintenance and troubleshooting without service disruption.

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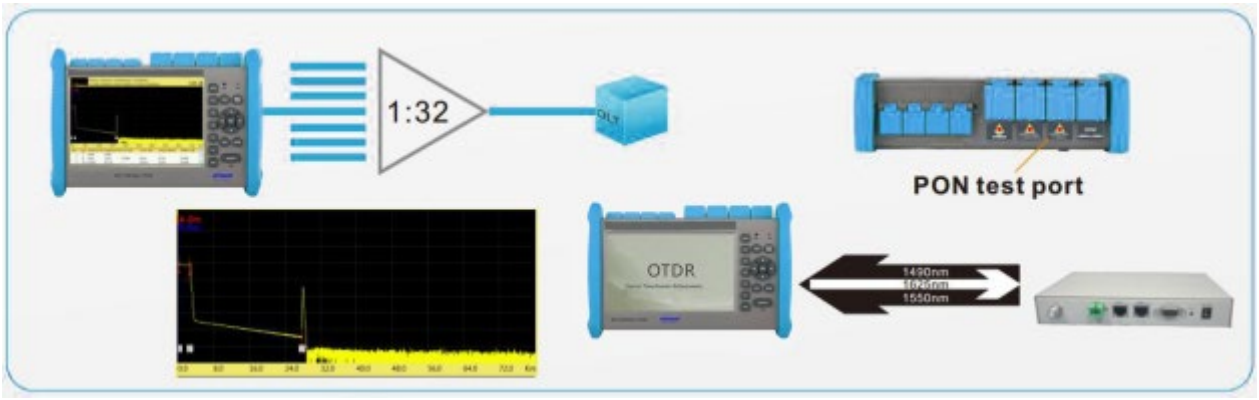
Last mile master
MOT-500 series OTDR could easily test through 1x32 PLC splitter in PON test (Model: MOT-500-T43F).



Fiber Microscope
Microscope is optional for MOT-500 series OTDR. 400x amplification and variety of accessories ensure perfect terminal condition before test.

The essential first step
Taking time to properly inspect connector end faces can prevent a slew of problems down the lines, saving you time, money and headaches.

Result transfer
Check test results on PC or PDA through USB; 4 GB large internal memory space could store more than 40,000 groups of results.
Link in line

- Download reference traces and settings from database
- Send measurement results via email
- Ask for remote help

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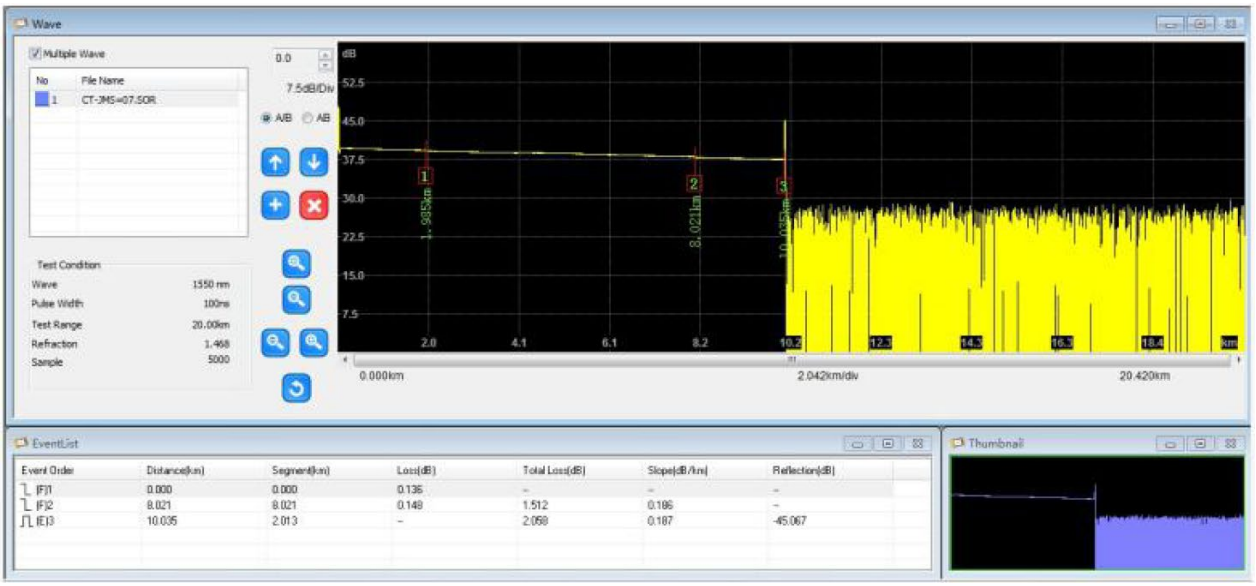
Data Manager

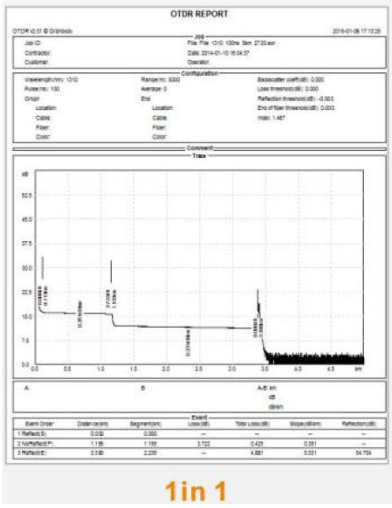
Use Data Manager to elaborate and print out result files on upper computer within a few steps.
High Compatibility
Support:

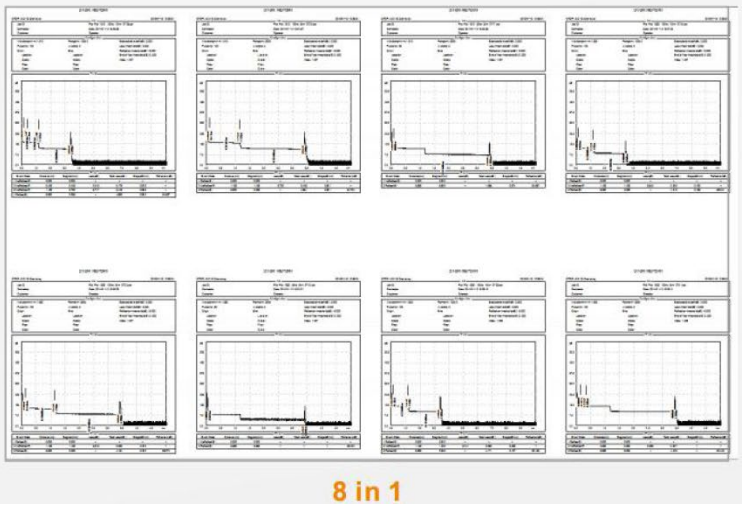
- Windows 7 (32/64 bit system)
- Windows 10 (32/64 bit system)
- Microsoft Office Excel 2007
- Microsoft Office Excel 2010
- Microsoft Office Excel 2013



Delicate Report

-Simplified display style easy to read, support multi-result printing.





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Specification

Dimension	253×168×73.6 mm 1.5 kg (battery included)
Display	7 inch TFT-LCD with LED backlight (touch screen function is optional)
Interface	1×RJ45 port, 3×USB port (USB 2.0, Type A USB×2, Type B USB×1)
Power Supply	10 V DC, 100 to 240 V AC, 50-60 Hz
Battery	7.4 V DC, 4.4 Ah lithium battery (with air traffic certification) Operating time: 12 hours[1], Telcordia GR-196-CORE Charging time: <4 hours (power off)
Power Saving	Backlight off: Disable/1 to 99 minutes Auto shutdown: Disable/1 to 99 minutes
Data Storage	Internal memory: 4 GB (about 40,000 groups of curves)
Language	User selectable: English, Czech, German, Spanish, Russian, Portuguese, French, Turkish, Italian, Hungary, Arabic On request: Slovenian, Serbian, Polish, …
Environmental Conditions	Operating temperature and humidity: -10°C to +50°C ≤95 % (non-condensation) Storage temperature and humidity: -20°C to +75°C ≤95% (non-condensation) Proof: IP65 (IEC60529)
Accessories	Standard: Main unit, power adapter, Lithium battery, FC adapter, USB cord, User guide, CD disk, carrying case Optional: SC/ST/LC adapter, Bare fiber adapter

Technical parameter

Type[2]	Testing Wavelength (MM: ±20 nm, SM: ±10 nm)	Dynamic Range (dB)[3]	Event/Attenuation Dead-zone (m)[4]
MOT-500-MD21	850/1300 1310/1550	19/21 35/33	1.5/8 1.5/8
MOT-500-D45	1310/1550	45/43	2/14
MOT-500-T43F	1310/1550/1625	43/41/41	2/14

Test parameter

Pulse Width	Single mode: 3 ns, 5 ns, 10 ns, 20 ns, 50 ns, 100 ns, 200 ns, 500 ns, 1 µs, 2 µs, 5 µs, 10 µs, 20 µs Multimode: 3 ns, 5 ns, 10 ns, 20 ns, 50 ns, 100 ns, 200 ns, 500 ns, 1 µs, 2 µs
Testing Distance	Single mode: 100 m, 500 m, 2 km, 5 km, 10 km, 20 km, 40 km, 80 km, 120 km, 160 km, 240 km Multimode: 500 m, 2 km, 5 km, 10 km, 20 km, 40 km
Sampling Resolution	Minimum 5 cm
Sampling Point	Maximum 128,000 points
Linearity	≤0.05 dB/dB
Scale Indication	X axis: 4 -70 m/div, Y axis: Minimum 0.09 dB/div

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Distance Resolution	0.01 m
Distance Accuracy	± (1 m+measuring distance×3×10-5+sampling resolution) (excluding IOR uncertainty)
Reflectance Accuracy	Single mode: ±2 dB, multi-mode: ±4 dB
IOR Setting	1.4000-1.7000, 0.0001 step
Units	km, miles, feet
OTDR Trace Format	Telcordia universal, SOR, issue 2 (SR-4731) OTDR: User selectable automatic or manual set-up
Testing Modes	Visual fault locator: Visible red light for fiber identification and troubleshooting Light source: Stabilized Light Source (CW, 270 Hz, 1 kHz, 2 kHz output) Field microscope probe
Fiber Event Analysis	-Reflective and non-reflective events: 0.01 to 1.99 dB (0.01 dB steps) -Reflective: 0.01 to 32 dB (0.01 dB steps) -Fiber end/break: 3 to 20 dB (1 dB steps)
Other Functions	Real time sweep: 1 Hz Averaging modes: Timed (1 to 3600 sec.) Live Fiber detect: Verifies presence communication light in optical fiber Trace overlay and comparison

VFL Module (Visual Fault Locator, as standard function):

Wavelength (±20nm)	650 nm
Power	10 mW,CLASS III B
Range	12 km
Connector	FC/UPC
Launching Mode	CW/2 Hz

PM Module (Power Meter, as optional function):

Wavelength Range (±20 nm)	800 to 1700 nm
Working wavelength	850/1300/1310/1490/1550/1625/1650 nm
Test Range	PM: -65 to+5 dBm (standard); PMH: -40 to +23 dBm (optional)
Resolution	0.01 dB
Accuracy	±0.35 dB, ±1 nW
Modulation Identification	270/1 k/2 kHz, P input ≥-40 dBm
Connector	FC/UPC

LS Module (Laser Source, as optional function):

Working Wavelength (±20nm)	1310/1550/1625 nm[5]
Output Power	Adjustable -25 to 0 dBm
Accuracy	±0.5 dB
Connector	FC/UPC

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FM Module (Fiber Microscope, as optional function):

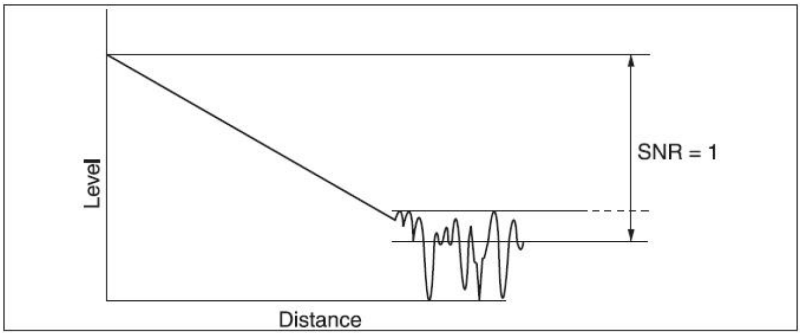
Magnification	400X
Resolution	1.0 μm
View of Field	0.40×0.31 mm
Storage/working Condition	-18°C to 35°C
Dimension	235×95×30 mm
Sensor	1/3 inch 2 million of pixel
Weight	150 g
USB	1.1/2.0
Adapter[6]	SC/PC (SC/PC adapter) FC/PC (FC/PC adapter) LC-PC-F (For LC/PC adapter) 2.5 PC-M (for 2.5 mm connector: SC/PC, FC/PC, ST/PC)

Notes:

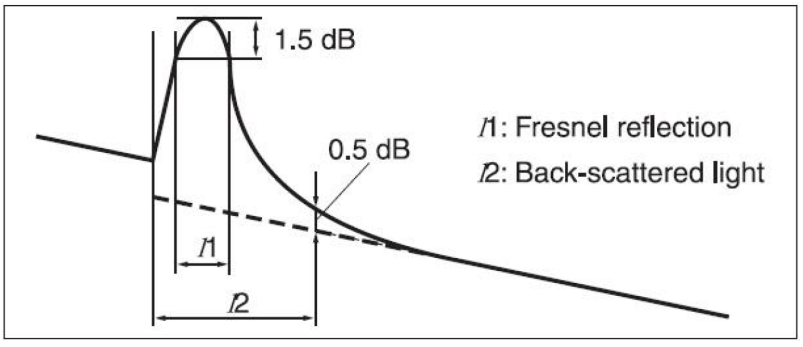
1) Typical, backlight off, sweeping halted at 25°C, 12 hours typical continuous testing.

2) Model T43F are integrated with optical filter, which allow them to test PON network online (by using 1625 nm wavelength) and will not interrupt the fiber signal.

3) Dynamic range is measured with maximum pulse width, averaging time is 3 minutes, SNR=1; The level difference between the RMS noise level and the level where near end back-scattering occurs.



4) Event dead zone is measured with pulse width of 3 ns; attenuation dead zone is measured with pulse width of 5ns.



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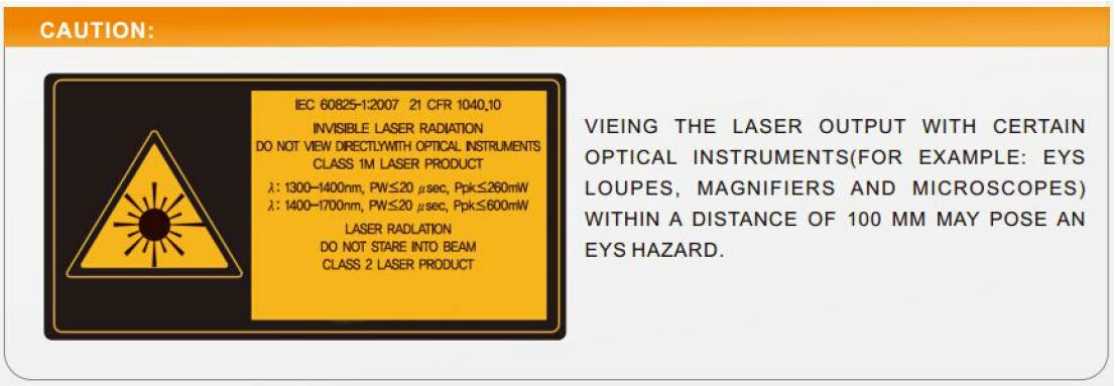
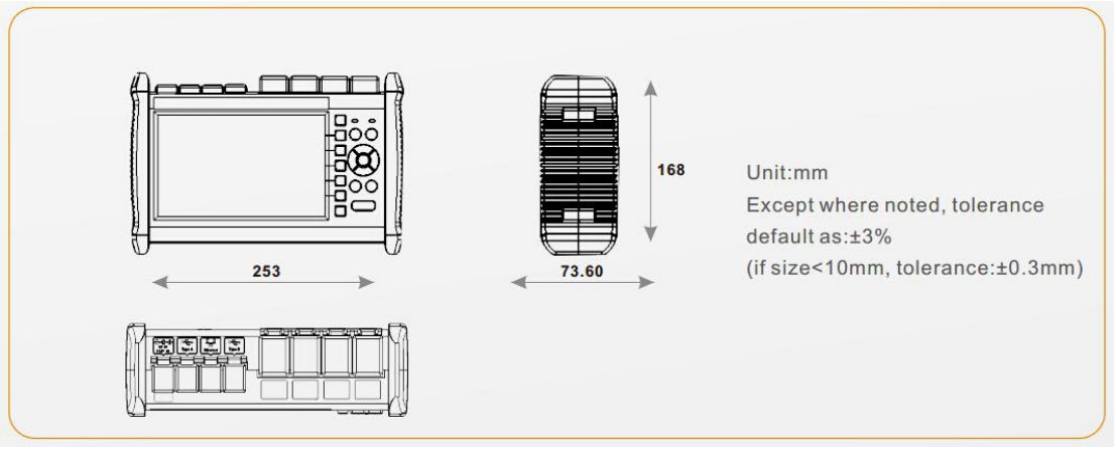
5) 1310/1550 nm laser source uses OTDR1 port, and 1625 nm or 850/1300 nm uses OTDR2 port.

6) For more adapters, please contact us.





Ordering Code:

MOT-500 - XXX - LS - PM(H) - FM - VFL - YYY

MD21	SM + MM
D45	Long haul
T43F	PON

YYY - connector type	
UPC	FC/PC

Options:

LS laser source through OTDR1
PM(H) power meter module
FM fiber microscope
VFL visual fault locator

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