OPTICAL
TIME DOMAIN
REFLECTOMETER

AR-OTDR-T350
AR-OTDR-T400-FLM
AR-OTDR-T430-FLM
AR-OTDR-T450-FLM

AR-OTDR-T series Optical Time Domain Reflectometer (OTDR) is an intelligent meter for the detection of fiber communications systems. The new generation AR-OTDR-T series has higher test performance and product stability. Larger dynamics and optimized deadzone can provide more accurate fiber testing. Whether you want to detect link layer in the construction and installation of optical network or proceed efficient maintenance and trouble shooting, AR-OTDR-T series can be your best assistant.

1. FEATURES

1. 7 inch anti-reflection LCD touch screen
2. Dynamic range from 26dB to 45dB, small deadzone 0.8m/3.5m
3. Excellent FLM (Fiber Link Map) performance make fiber testing simpler and more efficient
4. PON online test module (1625nm/1650nm) is optional
5. MMF test module (850/1300nm) is optional
6. Optimized PON test capability to pass through 1x128 splitter
7. Multi function Integrated design, smart and rugged
8. Support remote control on PC software via RJ45 cable
9. Built-in OTDR trace PDF report and FLM testing PDF report
10. Multi-language display and input(more than 14 languages)
11. FTTX test with PON networks
12. CATV network testing
13. Access network testing
14. LAN network testing
15. Metro network testing
16. Lab and Factory testing
17. Live fiber troubleshooting

Ready for all kinds of environment.

AR-OTDR-T series is specially designed for tough outdoor jobs. Humanized menu, Light-weight, easy operation,low-reflection 7-inch touch screen LCD and more than 6 hours working period make it perfect in field testing.

2. STRUCTURE

What you need is all-in-one!

AR-OTDR-T series is a highly integrated platform that features with four optical module slots, with a large 7-inch color touch screen, a high-capacity lithium battery, an optional microscope (through universal USB port), andbuilt-inoptical test functions, such as PON test module, Fiber link map(FLM), visual fault locator (VFL), optional power meter (OPM) and laser source(OLS), making it qualified in the installation, activation, and maintenance of FTTx/Access/Metropolitanareanetwork/backbone network.
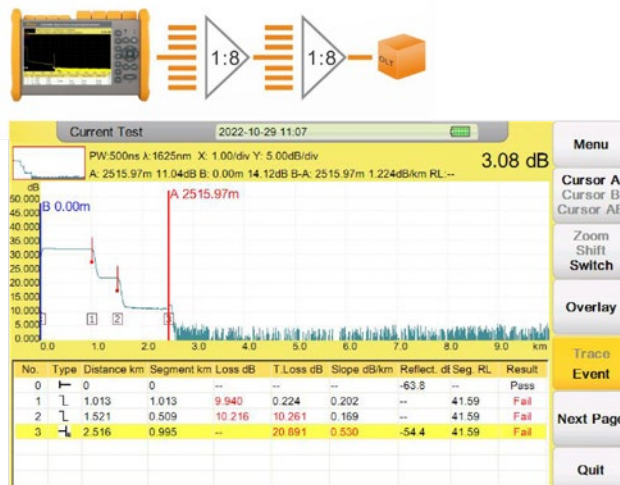

Main Menu Screenshot

PON Network Online Test

Optimized PON Test Capability

With improved hardware and advanced algorithm, AR-OTDR-T350, AR-OTDR-T400-FLM, AR-OTDR-T430-FLM, AR-OTDR-T450-FLM can easily pass through 1x64 splittereven 1x128 splitter and accurately describe the overall structure of PON network.

In particular, with FLM mode, users can automatically test without complicated settings to obtain the most accurate and intuitively test results. In addition, FLM provides the Pass/Fail function of the PON network, which can intuitively display the failure event in PON network.
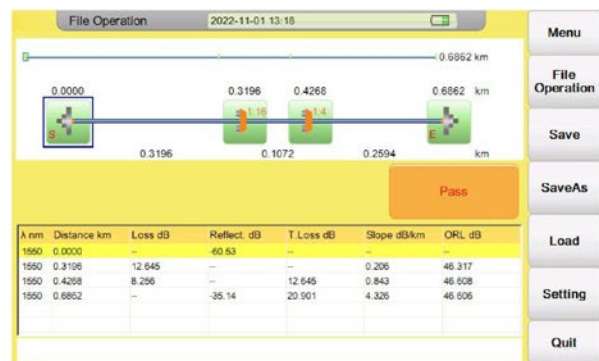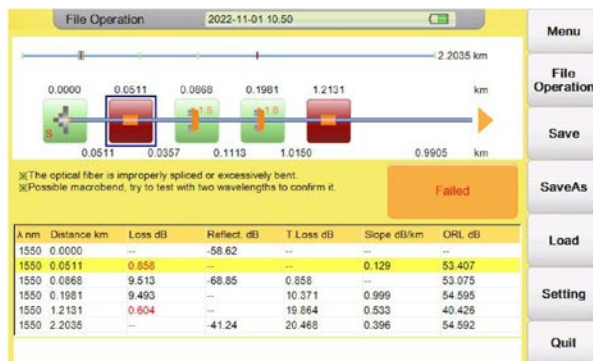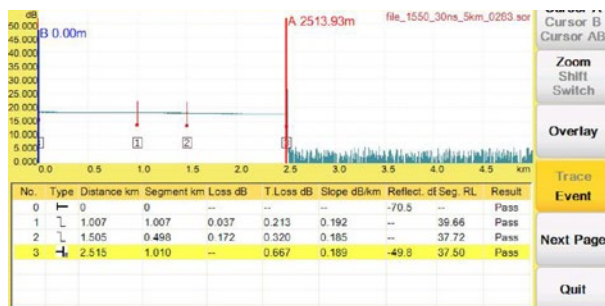

Pass through 1x8+1x8 splitter network

Pass through 1x16+1x4 splitter network

Through the built-in optical cut-off filter, the AR-OTDR-T Series can realize the testing for PON network activation, online measurement and maintenance via 1625nm testing wavelength.

Smaller test dead zone and accuracy



Event deadzone: 0.8m

Attenuation deadzone: 3.29m

Multiple Dynamic Range (26dB~45dB)
Long Distance Test Capability (over 200km@AR-OTDR-T-Series)

The AR-OTDR-T Series includes various dynamic test modules from a short-distance access network to a long-distance backbone network, support 45dB dynamic range which can test up to 200km. Even the AR-OTDR-T350 can perform beyond 120 km optical fibertest.
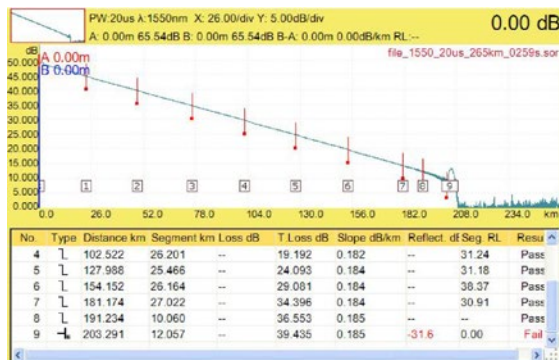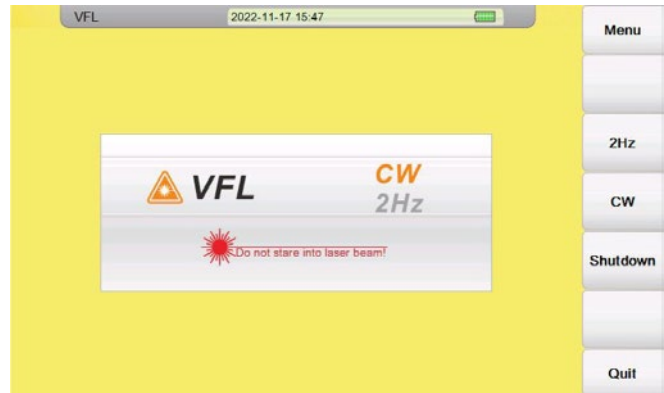

AR-OTDR-T450-FLM screenshot
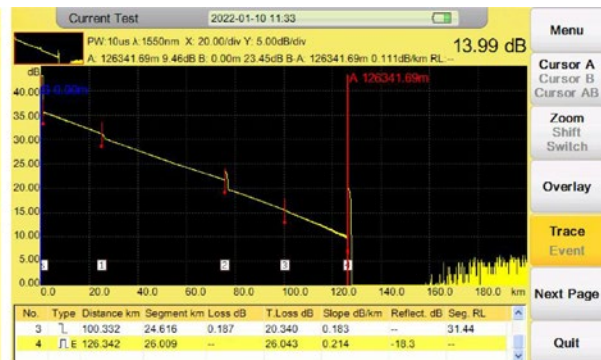

AR-OTDR-T350 screenshot

VFL (visual fault locator)
The 10mw VFL, available as a standard module in AR-OTDR-T-Series, offers built-in 650nm visual red light can test upto10km.


OPM (optical power meter)
AR-OTDR-T-Series comes with optional built-in power meter that let technicians easily verify thepresence and the power of a signal. Two types of power meter are optional (TypeA: -60~+5dBm and TypeB: -40~+23dBm).
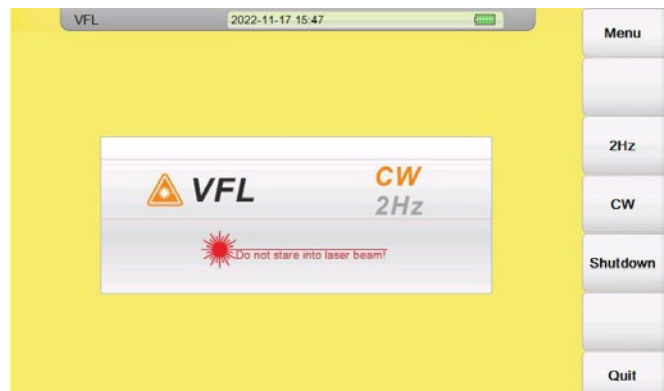
OLS (optical laser source)

AR-OTDR-T-Series 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. The functions of laser source and power meter can work at the same time to verify the link loss performance. The output power >-8dBm and support CW/270Hz/1kHz/2kHz output mode.
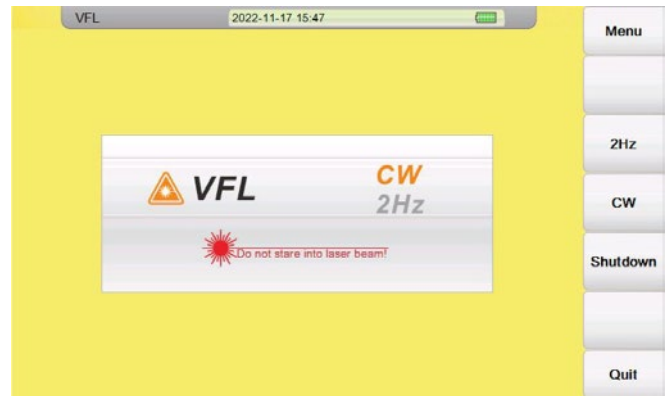
## EFD (Endface Fiber Detector)

The optional fiber inspection probe facilitates the inspection before the connection. AR-OTDR-T350 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. There are two fiber microscope models can work with AR-OTDR-T350 series.
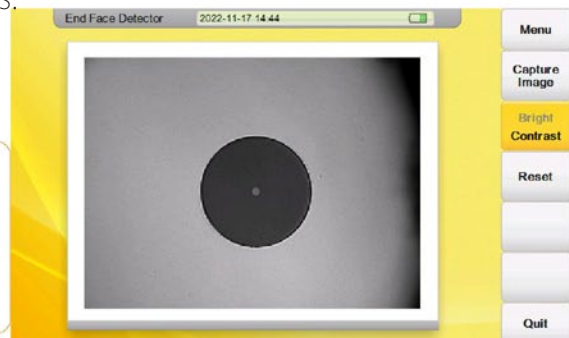
| Model	Picture	Standard Tips
FIM-4		SC-PC-F(for SC/PC female bulkhead) FC-PC-F(for FC/PC female bulkhead) LC-PC-F(for LC/PC female bulkhead) 2.5PC-M(for 2.5mm/PC male connector)
FIM-18		25-U-M (for 2.5mm/PC male connector) 125-U-M(for 1.25mm/PC male connector) FC-U-F(for FC/PC female bulkhead) SC-U-F(for SC/PC female bulkhead) LC-U-F(for LC/PC female bulkhead)

Bulit-in Generate PDF Report

Multi language OTDR trace PDF report and FLM testing PDF report can be generated directly in the machine.
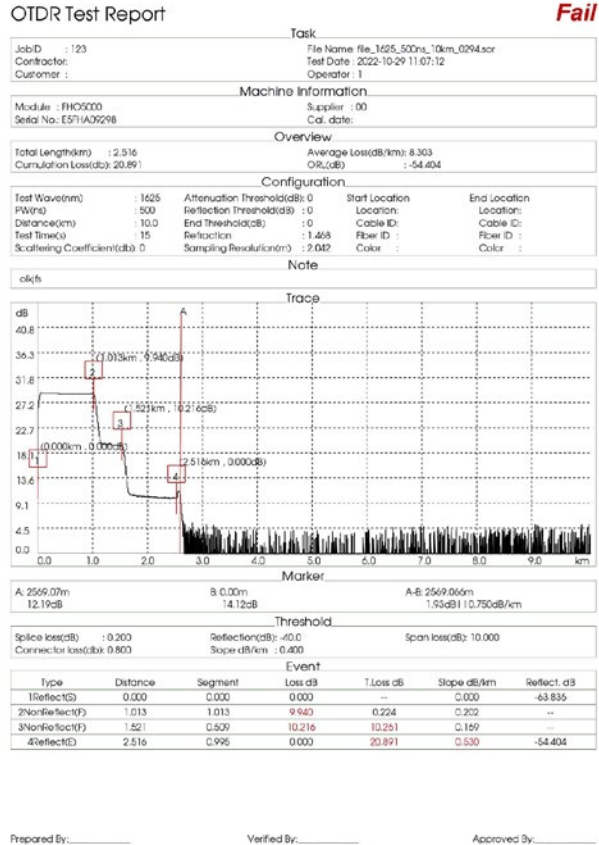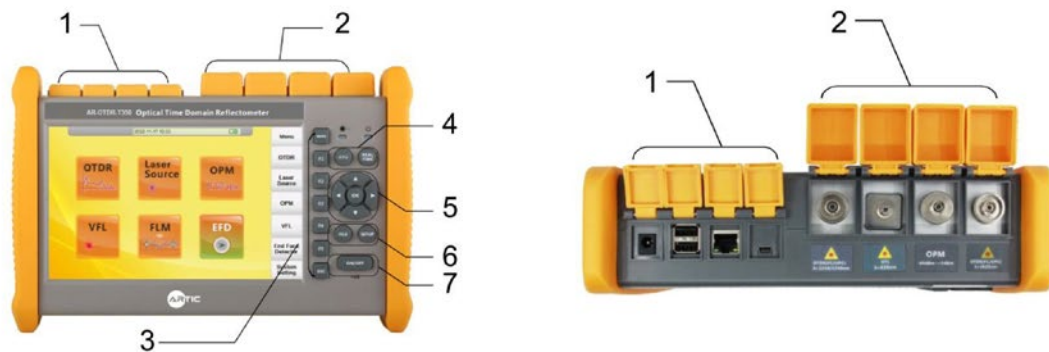

Multi-language Display and Input

AR-OTDR-T-Series supports multiple overseas languages and is applicable to customers in different countries.
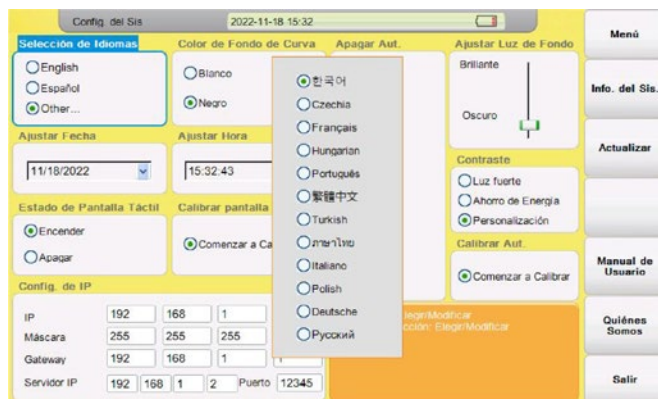
INTERFACE DEFINITION

No	Name	Description
1	Electric ports (From left to right)	Charging port: DC input 10V/4A USB 2.0 port: Insert USB disk to upgrade RJ45 Ethernet port: remote control port Mini USB port: Transfer file to PC via USB cable
2	Optical ports (From left to right)	OTDR port1: for 1310nm/1550nm testing VFL port: 2.5mm universal port OPM port: for optical power testing OTDR port2(optional): for 1625nm testing
3	Function key	Menu: Enter the Main menu interface F1-F5:Enter the corresponding menu option ESC: Enter the system setting or back to main menu You can check "System info/language/date/power saving/bright light/IP setting, etc"in system setting
4	Test key	AVG: Perform OTDR average test ; REAL TIME: Perform OTDR realtime test
5	Direction key	Move cursor and confirm
6	File and Setup	File: To enter the saved file storage ; Setup: To enter the OTDR testing setting
7	ON/OFF key	Long press>2s to power on/off the OTDR

Note: Product appearance and parameters are subject to change without notice.

3. GENERAL SPECIFICATION

Dimension	253×168×73.5mm/1.5kg (battery included)
Display	7 inch touch screen TFT-LCD with LED backlight
Interface	1×RJ45 port, 3×USB port (USB 2.0, Type A USB×2, Type B USB×1)
Power Supply	10V(dc), 100V(ac) to 240V(ac), 50~60Hz
Battery	7.4V(dc)/4.4Ah lithium battery (with air traffic certification) Operating time: 6 hours①, 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: 16GB
Language	User selectable (English, traditional Chinese, French, Korean, Russian, Spanish, Portuguese, Turkish, Italian, German, Thai, Hungarian, Czech, Vietnamese, Polish - contact us for availability of others)
Environmental Conditions	Operating temperature and humidity: -10℃~+50℃, ≤95%(non-condensation) Storage temperature and humidity: -20℃~+75℃, ≤95%(non-condensation)
Accessories	Standard: Main unit, power adapter, Lithium battery, FC adapter, USBcord, Use guide,carrying case Optional: SC/ST/LC adapter, Bare fiber adapter, Fiber microscope, Launch cable box

Technical parameter

Type②	Testing Wavelength (MM: ±20nm, SM: ±20nm)	Dynamic Range (dB)③	Event/Attenuation Dead-zone (m)④
AR-OTDR-T350	1310/1550/1625	35/33/33	1/4
AR-OTDR-T400-FLM	1310/1550/1625	40/38/38	0.8/3.5
AR-OTDR-T430-FLM	1310/1550/1625	43/41/41	0.8/3.5
AR-OTDR-T450-FLM	1310/1550/1625	45/43/43	0.8/3.5

4. TEST PARAMETER

Pulse Width	Single mode: 3ns, 5ns, 10ns, 30ns, 50ns, 100ns, 275ns, 500ns, 1μs, 2μs, 5μs, 10μs, 20μs Multi-mode: 3ns, 5ns, 10ns, 20ns, 50ns, 100ns, 200ns, 500ns, 1μs, 2μs
Testing Distance	Single mode: 500m, 2km, 5km, 10km, 20km, 33km, 40km, 80km, 120km, 160km, 265km Multi-mode: 500m, 2km, 5km, 10km, 20km, 40km
Sampling Resolution	Minimum 5cm
Sampling Point	Maximum 256,000 po
Linearity	≤0.05dB/dB
scale Indication	X axis: 4m~70m/div, Y axis: Minimum 0.09dB
Distance Resolution	0.01m
Distance Accuracy	$\pm$(1m+measuring distance$\times 3 \times 10$ -5+sampling resolution) (excluding IOR uncertainty)
Reflectance Accuracy	Single mode: $\pm$2dB, multi-mode: $\pm$4dB
IOR Setting	1.2000~1.7000, 0.0001 step
Units	Km, miles, fee
OTDR Trace Format	Telcordia universal, SOR, issue 2 (SR-4731) OTDR: User selectable automatic or manual set-up
Fiber Event Analy	-Reflective and non-reflective events: 0.01 to 1.99dB (0.01dB steps) -Reflective: 0.01 to 32dB (0.01dB steps) -Fiber end/break: 3 to 20dB (1dB steps

5. VFL MODULE (OPTIONAL)

Wavelength	650nm($\pm$20nm)
Power	10mw,CLASSIII B
Range	12km
Connector	Universal 2.5mm
Launching Mode	CW/2Hz

6. OPM MODULE (OPTIONAL)

Wavelength Range	800~1700nm
Calibrated Wavelength	850/1300/1310/1490/1550/1625/1650nm
Test Range	Type A: -60~+5dBm (standard); Type B: -40~+23dBm (optional)
Resolution	0.01dB
Accuracy	±0.35dB±1nW
Modulation Identification	270/1k/2k Hz,Pi≥-40dBm
Connector	FC/UPC

7. LS MODULE (OPTIONAL)

Wavelength Range	1310/1550/1625nm⑤
Output	≥-8dBm
Output mode	CW/270Hz/1kHz/2kHz
Connector	FC/UPC

## 9. PACKING INFO

Dimension (L*W*H)	13.5×10×6.5 inches	340×255×160mm
Weight	3.1 Pounds (including Battery)	2.8KG (including Battery)

NOTES

①Typical, backlight off, sweeping halted at 25℃, 6 hours typical continuous testing. ② Model AR-OTDR-T350/T400FLM/T430FLM/T450FLM are integrated with optical filter, which allow them to test PON network
online (by using 1625nm/1650nm wavelength) and will not interrupt the fiber signal.
③Dynamic range is measured with maximum pulse width, averaging time is 3 minutes, SNR=1; The level difference
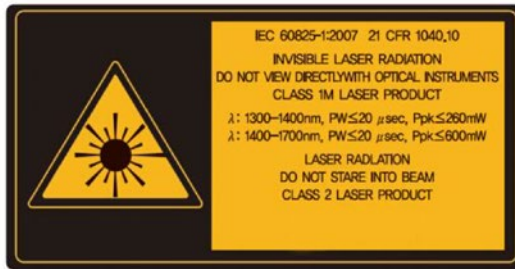between the RMS noise level and the level where near end back-scattering occurs.
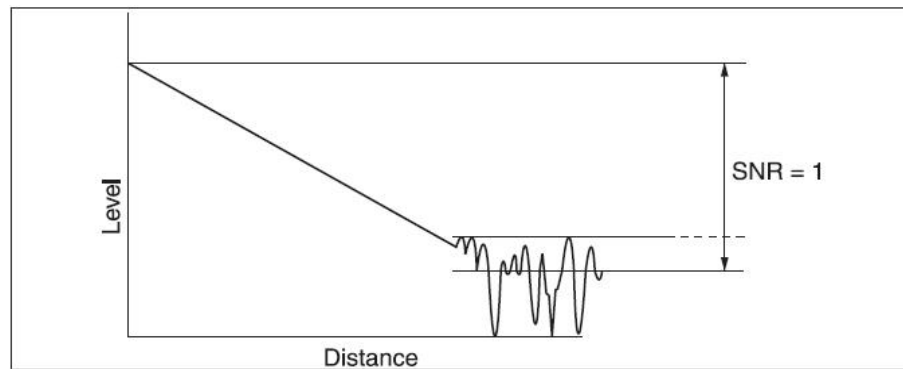
④Dead zone is measured with pulse width of 3ns and return loss under -55dB.
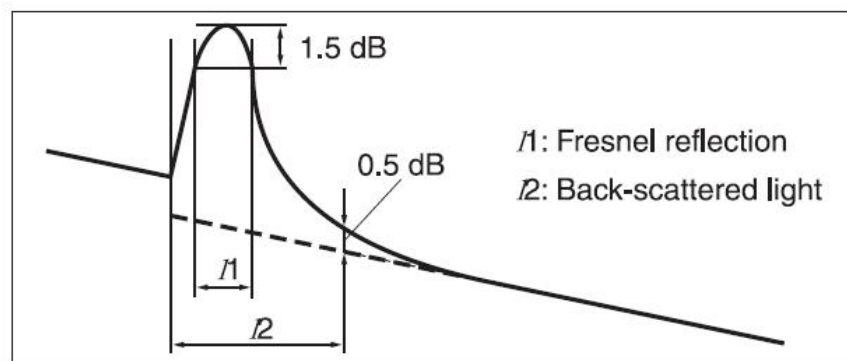

⑤1310/1550nm laser source uses OTDR1 port, and 1625nm or 850/1300nm uses OTDR2 port.
⑥For more adapters, please contact us

CAUTION:

IEC 60825-1:2007 21 CFR 1040.10

INVISIBLE LASER RADIATION
DO NOT VIEW DIRECTLYWITH OPTICAL INSTRUMENTS
CLASS 1M LASER PRODUCT

λ: 1300~1400nm, PW≤20 μsec, Ppk≤260mW
λ: 1400~1700nm, PW≤20 μsec, Ppk≤600mW

LASER RADLATION
DO NOT STARE INTO BEAM
CLASS 2 LASER PRODUCT

VIEING THE LASER OUTPUT WITH CERTAIN OPTICAL INSTRUMENTS(FOR EXAMPLE: EYS LOUPES, MAGNIFIERS AND MICROSCOPES) WITHIN A DISTANCE OF 100 MM MAY POSE AN EYS HAZARD.

253

168

73.50
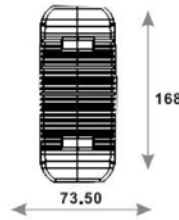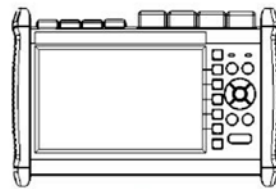
Unit:mm
Except where noted, tolerance
default as:±3%
(if size<10mm, tolerance:±0.3mm)