

MINI OTDR

(Optical Time-Domain Reflectometer)



User Manual

Product Overview

Mini OTDR is the most portable test instrument in the industry. It adopts the OTDR technical principles and integrates the powerful analysis software, which enables the OTDR fiber ranger detect fiber faults location more accurate and easier.

Main Characteristics

- *Portable, rugged, lightweight; Easy to use.
- *More accurate testing results and better repeatability.
- *Automatic Pulse Width Control design to ensure a convenient operation.
- *Easy to identify the faults location.
- *Built-in visual fault locator (VFL), conveniently to find the faults in dead zone.
- *Dust, water and shock proof, designed for field use.
- *Long battery life, up to 5000 measurements operation.
- *2.6 inch screen, data saves in SOR format.

1. Technical Specifications

Model	MINI OTDR
Wavelength	1310nm or 1550nm
Type of fiber	9/125um SM Fiber
Connector	FC、 SC/PC
Dynamic Range	22dB
Pulse Width	5ns~ 8000ns, Auto

Measurement	m
Event blind zone	3m
Attenuation blind	10m
Range accuracy	$\pm (1m+2\times 10^{-4}\times \text{distance})$
OPM	-50~+26dBm
	850/1300/1310/1490/1550/1625nm
VFL	$\geq 10\text{mW}$
Optical Light Source	1550nm
iLOM(Event Map)	
Power Supply	3pcs of Dry battery
Battery Work time	≥ 2000 times measure
Save Data	> 500
Work Temperature	-5~40°C
Save Temperature	-10~60°C
Humidity	0~85% (no condensation)
Net weight	300g

2.Button Description

- 1、 \odot : On / off key, when in power-on, short press switch to auto-off function ; long press about 3s off. When the top right corner of LED show \odot , The instrument will automatically shut down for about 10 minus in the state of no key operation.
- 2、SCAN, Start OTDR module to test the fiber. Press about 6s, enter auto cycle test,press exit again3;
- 3▲-View the previous measurement or choose previous option
- 4 ▼-View the next measurement or choose next option
- 5、◀--View a measurement to the left or select an option to the left
- 6、▶-View a measurement to the right or select an option to the right
- 7、ENT select the confirm butt
on or deselect
- 8、VFL light shows starting work

3.Configuration List

MINI OTDR
 3pcs of dry battery.
 USB, SC adapter;
 Oxford instrument kit,
 User manual

4.Function Operation



5.Instructions

1. Starting up, when clean the end face of fiber, connect the interface of OTDR, make the fiber and instrument correctly connect

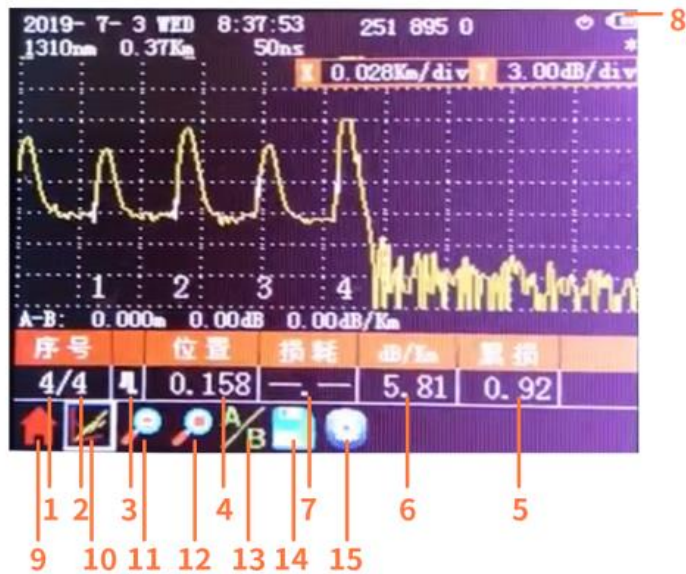
2. Press ENT setting parameter; pulse width choose auto. Continuous press ENT confirm and Exit parameter setting or continuous press exit ; Press SCAN start to test and get the results.

The theoretical value of refractive index is 1.4677 at 1550nm. The pulse width is set according to the length of the measuring fiber.

Small the pulse width, short the measurement distance, if cannot confirm the fiber length, can use 100ns, then choose the pulse width according to the measurement result curve; if short distance can choose <500m, if long distance choose <40km.

The greater the gain, the stronger the signal that can be measured.

3. Measurement results as follows:



- (1) Total number of events;
- (2) Event Number;
- (3) Event type (reflection event);
- (4) Event distance;
- (5) The loss value from the starting point to that point;
- (6) Incident loss per kilometer;
- (7) Event connection point loss,
- (8) Battery symbol, automatic shutdown symbol;
- (9) Main menus;
- (10) View curve;
- (11) Zoom in or out the curve;
- (12) Curve suspend;
- (13) Switch the A/B coordinate;
- (14) Save data icon;
- (15) Set the options icon.

6. Curve Analysis

Users could check the state of the fiber through analyzing the testing curve.

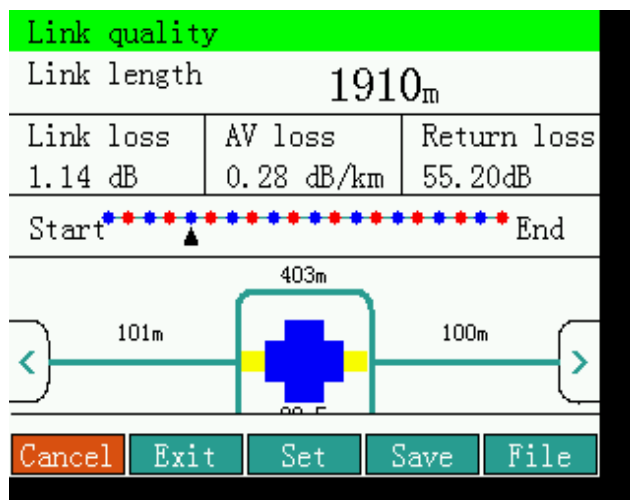


- (1)(2)(3) Connect point of the fiber.
- (4) Fiber end-face.

7. iLOM(Event Map)

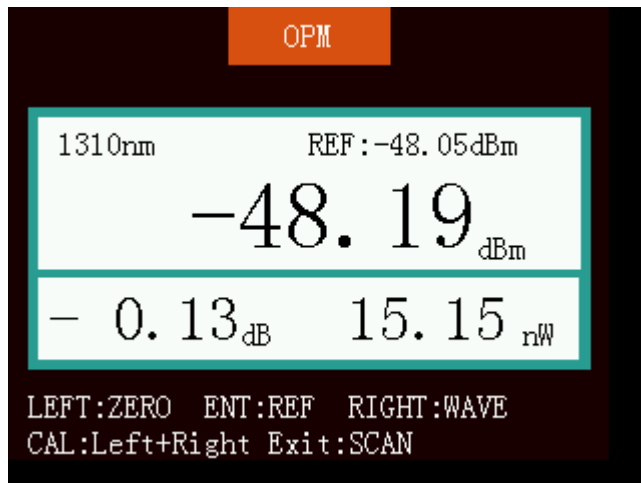
The function can be tested automatically by one key, and the information of the length of the link,

the type of event point and the position of breakpoint can be displayed in a graphical form. The result is easy is clear and easy to understand



8. OPM

This function is used to test the power of optical signal and insertion loss of various devices and optoelectronic components. It can identify and measure the frequency of 270/3301k/2kHz frequency optical signal.



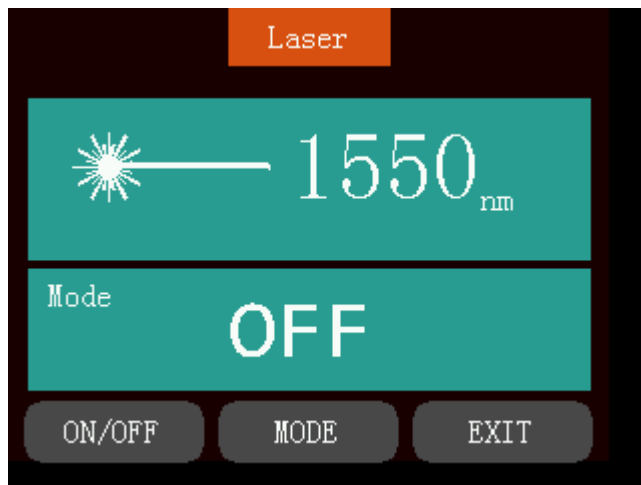
9. VFL Function

Connect fiber to VFL port, select VFL in menu, then you could see optical light(650nm) in breakpoint or fiber end-face.

Note: Do not see the light directly with your eyes! It is harmful to your eyes.



10.Laser



11. Data Saving

Press ENT button to save the testing data after testing. The ENT button is used to SAVE, READ and EXIT.

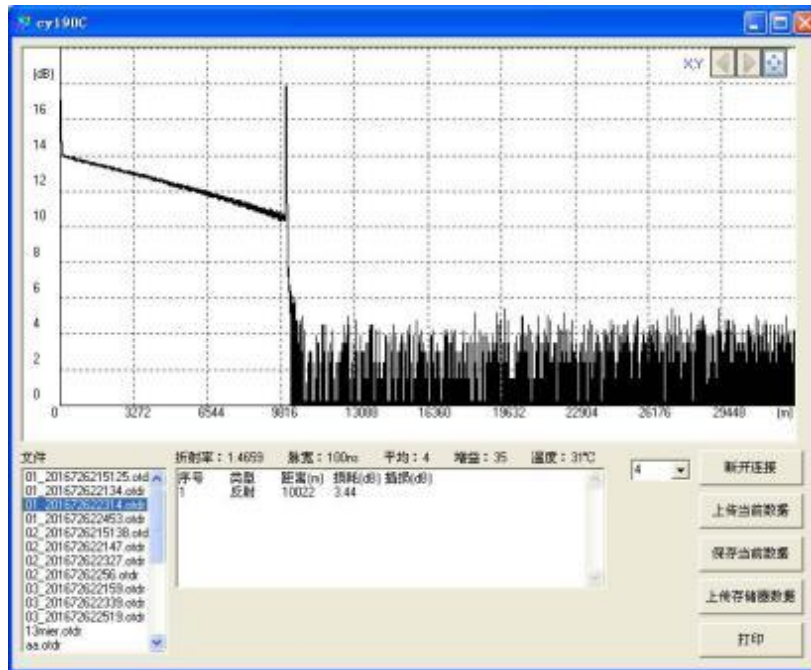
JWMINI OTDR could save more than 500pcs data.

12. Data Processing

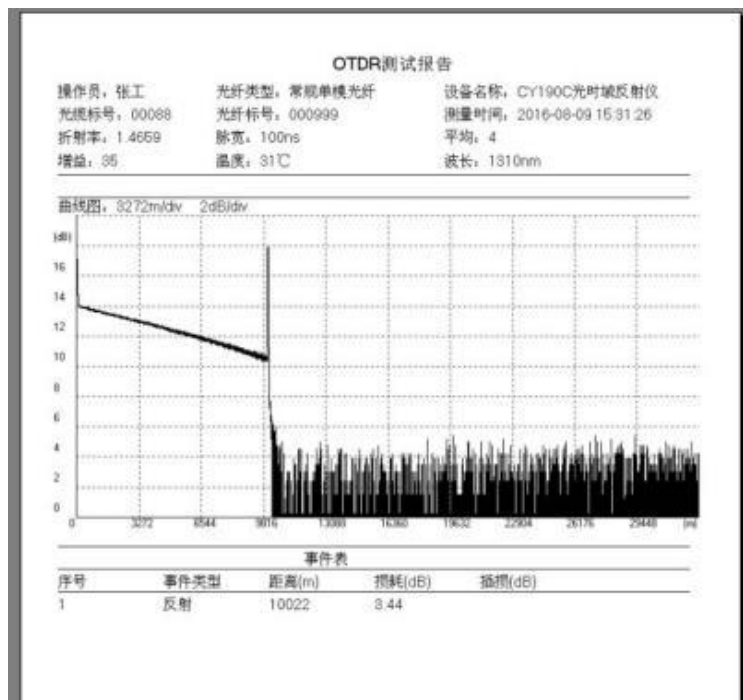
1. Copy MINI OTDR TRACE file to your computer (files will be provided with testers or users could contact seller for the file). Click usb driver.exe and install USB driver software.



2. After installing the driver software, connect the tester to computer with USB, click MINI OTDR.exe in the file and then the tester will be ready.



Connect the tester and derive curve data, and then users can enlarge curve to see details and print testing report.



13. Power Supply

MINI OTDR use 3pcs Alkaline battery to supply power, please change the battery when power is low. Please remove the battery if the tester is not used for long time.

Maintenance

1. Always keep the connector ports of your power meter are clean.
2. Once not in use, make sure the dust-proof cap is placed properly over the optical ports.
3. Try to use only the adaptor supplied, or will damage the tester.
4. Temperature may affect the tester, so do not put the tester in sunshine for long.

Quality Warranty

We do not recommend to repair MINI OTDR in field.

- 1) We warrant that MINI OTDR will be free from defects in material and workmanship for a period of 18 months. The date will be started from the date of goods shipment. If any defectives happened due to quality problems of the product during the warranty period, we promise to repair or replace free of charge. This warranty is limited to defects in workmanship and material.
- 2) MINI OTDR repairing does not cover damages from below condition:
 1. Repairing without our authorization;
 2. Wrong or abnormal operation.