

Mercury Series High-Performance OTDR

Product Overview

The Mercury Series is a high-performance, next-generation OTDR equipped with a 7-inch capacitive touch screen. It integrates multiple functions, including OTDR, VFL, LSPM, event mapping, end detection, optical loss testing, Ethernet testing, and remote testing with file management, enabling efficient field testing and maintenance.

With advanced intelligent hardware and software design, it delivers high accuracy for short-fiber testing and supports automated testing operations. The device also features powerful Ethernet test functions such as Ping and PPOE.

The Mercury Series OTDR is widely used to measure optical fiber length, loss, and connection quality. It is suitable for engineering construction, line maintenance, emergency repairs of optical communication systems, and R&D and production testing of high-grade optical fiber cables.

Key Features

- 0.5 m event dead zone
- Online detection with effective APD active protection
- Supports fast-charging protocol and power bank operation
- Ethernet testing with support for remote Ethernet testing
- Supports SM, MM, and SM+MM fiber testing
- PON network online testing
- Maximum dynamic range: 46 dB
- Mobile app-based wireless operation
- Integrated functions: OTDR, VFL, OPM, event mapping, end detection, optical loss testing, ethernet testing, remote testing, and file management



7-inch display with combined key and touch operation



Online test detection with warning/caution function



Dual-language interface (Chinese and English)



Batch processing for report file printing



Automatic multi-wavelength test analysis

Technical Specifications

OTDR												
Model	S0	S1	S2	S3	S4	T1	T2	T3	T4	T5	T6	F1
Type	SM											
Wavelength	1310/1550nm					1310/1490nm /1550nm		1310/1550nm /1625nm		1310/1550/1650nm		1310/1490/1550/1625 nm
Maximum Dynamic Range	32/30	35/33	38/36	42/40	46/45	32/30/30	37/35/35	32/30/30	37/35/35	32/30/30	37/35/35	37/35/35/35
Event Blind Zone	0.8m		0.5m			0.8m	0.5m	0.8m	0.5m	0.8m	0.5m	0.5m
ATT Blind Zone	4m		3.5m			4m	3.5m	4m	3.5m	4m	3.5m	3.5m
Test Range	100m / 500m / 1.25km / 2.5km / 5km / 10km / 20km / 40km / 80km / 125km / 260km / 420km											
Pulse Width	3ns/ 5ns/10ns/20ns/30ns/50ns/80ns/100ns/200ns/300ns/500ns/800ns/1μs/2μs/3μs/5μs/8μs/10μs /20μs											
Ranging Accuracy	± (0.75 m + sample interval + 0.005% × test distance)											
Loss Accuracy	0.03 dB/dB											
Sample Points	≥ 256k											
Sample Resolution	0.015 m – 16 m											
Reflection Accuracy	± 2 dB											
Loss Resolution	0.01 dB											
Loss Thershold	-40 °C to +70 °C											
File Format	SOR standard file format											
Loss Analysis	4-point method / 5-point method											
Laser Safety Level	Class II											
Refresh Rate	4Hz(typ.)											
Data Storage	Internal: 2 GB (≈200,000 curves); External: 64 GB											
Connector	FC/UPC (Interchangeable SC, ST)											
Data Interface	USB-A, USB Type-C, RJ45 LAN (10/100 Mbit/s)											
OPM												
Wavelength Range	800 nm – 1700 nm											
Connector	Universal FC / SC / ST											
Test Range	-50 dBm to +26 dBm / -70 dBm to +6 dBm											
Uncertainty	±5%											
Calibration Wavelength	850 / 980 / 1300 / 1310 / 1490 / 1550 / 1625 / 1650nm											
LS												
Laser Type	FP-LD											
Wavelength	Consistent with OTDR output wavelength											
Output Power	≥ -5 dBm (SM fiber)											
Mode	CW / 270 Hz / 1 kHz / 2 kHz											
Stability	CW, ±0.5 dB / 15 min (after 15 min preheating)											
Connector	FC/UPC (Interchangeable SC, ST)											
VFL												
Wavelength	650 nm ± 20 nm											
Output Power	≥ 10 mW											
Mode	CW / 1 Hz / 2 Hz											
Connector	FC/UPC (Interchangeable SC, ST)											
Others												
Display	7-inch color LCD with touch screen											
Resolution	800 × 480											
Power Supply	Type-C adapter; Input: 100–240 V AC, 50/60 Hz; Output: 5 V/3 A, 9 V/2 A, 12 V/1.5 A											
Battery	Lithium battery, 3.7 V, 10,400 mAh											
Operating Temperature	-10 °C to +50 °C											
Storage Temperature	-40 °C to +70 °C											
Relative Humidity	0–95%, non-condensing											
Weight	≤ 1.2 kg											
Dimensions	215 mm × 160 mm × 50 mm											