ShinewayTech® compact palmOTDR now offers even more testing capacities, flexibility and value with combination of 850/1300/1310/1490/1550/1625/1650nm (Mono/double/triple/Quad wavelength) OTDR, 1310/1490/1550nm PON Power Meter, Stabilized Laser Source and VFL. The OTDR wavelengths cover the applications of regular end-to-end fiber characterization (1310/1550nm), premise/ enterprise LAN testing (850/1300nm), FTTx fiber link construction verification (1490nm) and PON live fiber troubleshooting (1625/1650nm with filter). The integrated PON Power Meter can perform in-service testing of all PON signals (1310/1490/1550nm) on any spot of the network featuring pass-through design and burst mode support. palmOTDR is your ultimate solution to meet various testing requirements of entire fiber network.

# palmOTDR
## Series

**Handheld OTDR**

## Most Compact High-Performance OTDR

- Comprehensive fiber applications, ideal for LAN/WAN/FTTx certification & trouble-shooting:
  SM: 1310/1490/1550, 1625/1650nm (with filter), up to 50dB
  MM: 850/1300nm, 21/24dB
  SM&MM: 850/1300/1310/1550nm, 21/24/32/30dB
- Fault locating, fiber length/loss measurement, connector/splice/ splitter/ macro bend/fiber-end detection
- Built-in PON Power Meter for Triple-play live measurement
- Optional Stabilized Laser Source, SM/MM Power Meter and VFL
- FTTx in-service testing/ Testing through splitter:(1625/1650nm with filter)
- Splitter & fiber-end identifiable

- Auto/Manual(2-point/5-point)/Averaging/Real-time test
- Pass/Fail assessment and ORL test function
- Quick start: <5 seconds
- Perfect user interface, handheld & lightweight (1kg)
- Hotkeys: Easiest operation in the world, push-and-test
- 1000 test records storage
- Bellcore file format (.sor)
- PC software for batch data processing
- USB data interface, driver-free
- Multiple languages: EN/DE/IT/FR/ES/PT/RU/KR/VN/CN etc.
- 8 hrs continuous operation/20 hrs standby
- Dust-shock proof (2m drop test)
- CE, FCC, FDA certificates

## In−service Testing (Through Splitter)

- In-service testing (1625nm with filter)
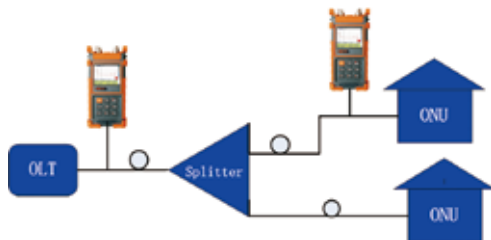


- Testing through splitter, splitter and fiber end identifiable
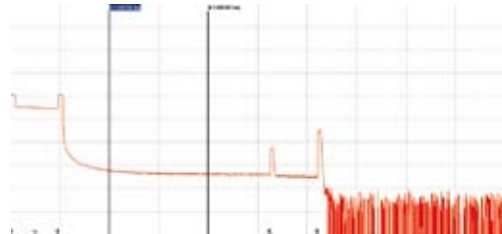


## Live Optical Signal Check

When OTDR tests with 1310/1490/1550nm wavelength, the live signals transmitting in the tested fiber may not only affect OTDR measurements but also damage the equipments connected to the network (SDH/WDM/PON) and OTDR receiver. palmOTDR series avoids the problem by starting in-service communication check before testing with message warning and auto termination functions to effectively protect test instruments and communications equipments.
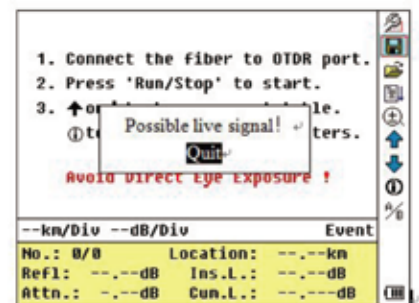


## Built-in PON Power Meter

The integration of PON Power Meter into such a small unit of palmOTDR makes FTTx certification and troubleshooting an exciting experience and efficient work. The PON Power Meter module can perform in-service testing of all PON signals (1310/1490/1550nm) on any spot of the network featuring pass-through design, burst mode and Pass/Warning/Fail assessment function, which can greatly help you evaluate PON signals transmission quality.

## Extended Stabilized Laser Source

Stabilized Laser Source shares palmOTDR optical port and work on the same working wavelength of palmOTDR.

CW

**Laser Off**

◀ Mode ▶
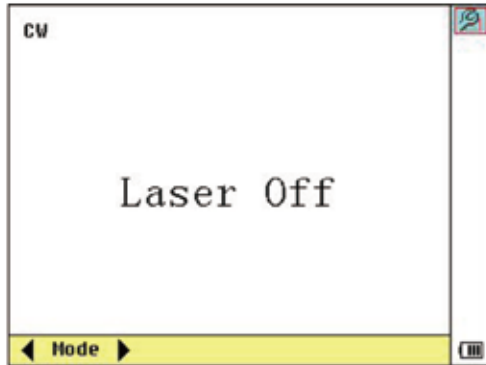
## Extended Optical Power Meter

- No warm-up
- Absolute power value and power loss measurement
- High accuracy, zero shift
- Power monitoring, high-low limit setting
- Reference setting

CW
1310nm
Ref:-10.00dBm

-------  Low
dBm

◀ Mode ▶
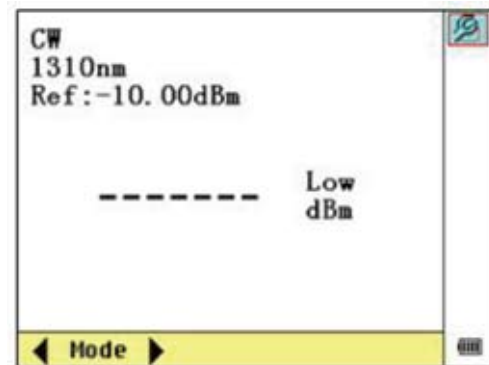
## Extended Optical Connector Inspector Module (MCI100 module)

- Focusing knob for fast focus
- Eye-safe and clear video viewing
- Interchangeable connector tips(male and female, PC and APC, 1.25mm and 2.5mm etc.)
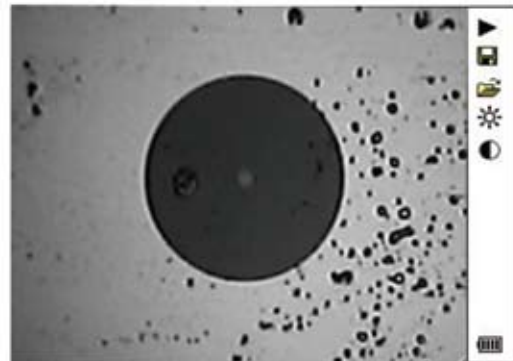
## Optimized Interface design

- Graphical User Interface
- Color and High Resolution

OTDR   VFL   PPM

SLS   OCI   System

## OTDR LinkImage Software

0.00m

24.5Km 6.00dB/Div    001         Event

No.: 1/4   ⊢ Location:   0.00m
Refl: -39.68dB   Ins.L.:   --.--
Attn.:   0.000   Cum.L.:   0.000dB
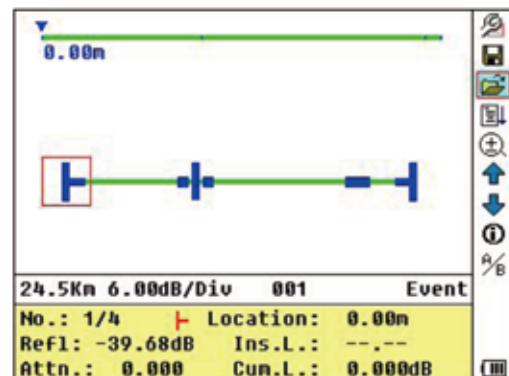
## OTDR Trace Manager Software

TraceManager software can display, analyze and edit trace files, generate and print comprehensive test and analysis reports in various forms.

- Trace viewing, events analysis
- Batch editing and flexible printing
- Trace viewing, events analysis
- Multi traces comparison
- Batch editing and flexible printing
- Bidirectional testing (Optional)
- CSV/ASCII report formats
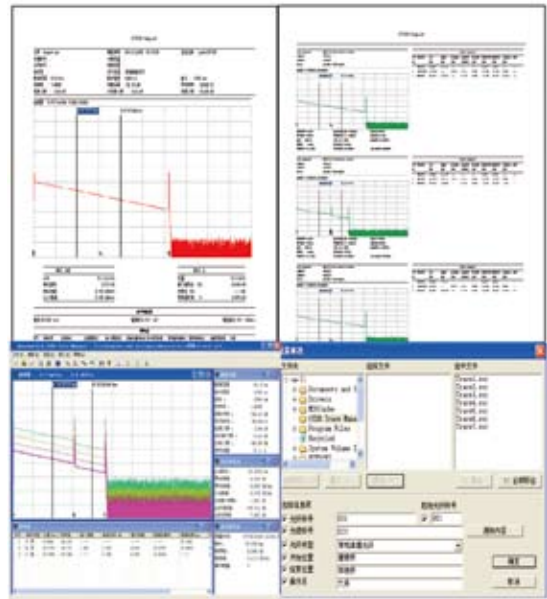
## Specifications

| Model [1] | | Wavelength (±20nm) | Dynamic Range[2] | EDZ (m)[3] | ADZ (m)[3] |
|---|---|---|---|---|---|
| Basic | Advanced | | | | |
| palmOTDR-M20AE | palmOTDR-M20AE-VPSI | 850/1300 | 21/24dB | 1.5 | 5 |
| palmOTDR-S20AE | palmOTDR-S20AE-VPSI | 1310/1550 | 32/30dB | 1.8 | 5 |
| palmOTDR-S20BE | palmOTDR-S20BE-VPSI | 1310/1550 | 35/34dB | 1.5 | 5 |
| palmOTDR-S20C/N | palmOTDR-S20C/N-VPSI | 1310/1550 | 40/38dB | 0.8 | 4.5 |
| palmOTDR-S20D/N | palmOTDR-S20D/N-VPSI | 1310/1550 | 45/43dB | 0.8 | 4.5 |
| palmOTDR-S20F | palmOTDR-S20F-VPSI | 1310/1550 | 50/48dB | 0.8 | 4.5 |
| palmOTDR-S20C/P | palmOTDR-S20C/P-VPSI | 1310/1490/1550 | 38/37/37dB | 0.8 | 4.5 |
| palmOTDR-S20C/X | palmOTDR-S20C/X-VPSI | 1310/1550/1625[4] | 38/37/37dB | 0.8 | 4.5 |
| palmOTDR-P11C | palmOTDR-P11C-SI | 1625[4] | 37dB | 0.8 | 4.5 |
| palmOTDR-P31C | palmOTDR-P31C-SI | 1310/1550/1625[4] | 38/37/37dB | 0.8 | 4.5 |
| palmOTDR-Q40A | palmOTDR-Q40A-VPSI | 850/1300/1310/1550 | 21/24/32/30dB | 1.5 | 4.5 |
| Selectable Range (Km) | 0.1, 0.3, 0.5, 1.3, 2.5, 5, 10@850nm; 0.1,0.3,0.5,1.3,2.5,5,10,20,40,80@1300nm; 0.3, 1.3, 2.5, 5, 10, 20, 40, 80, 120, 160, 240@others | | | | |
| Pulse Width | 10ns, 30ns, 100ns, 300ns, 1μs@850nm; 10ns, 30ns, 100ns, 300ns, 1μs, 2.5μs@1300nm; 5ns, 10ns, 30ns,100ns, 300ns, 1μs,2.5μs, 10μs, 20μs@others | | | | |
| Averaging Time | Quick, 15s, 30s, 1min, 2min, 3min | | | | |
| Distance Measure Accuracy | $\pm(1m+5\times10^{-5}\times distance+sampling\ space)$ | | | | |
| Attenuation Detect Accuracy | ±0.05dB/dB | | | | |
| Reflection Detect Accuracy | ±4dB | | | | |

| | |
|---|---|
| Data Storage | 1000 records |
| Connectivity | USB |
| Connector | FC/PC (Interchangeable SC, ST; optional LC) |
| Power Supply | NiMH Battery / AC Adapter |
| Battery Life | 8 hrs continuous operation, 20 hrs standby (on one charge); recharging time < 4 hrs |
| Operating Temperature | -20°C to 50°C |
| Storage Temperature | -40°C to 70°C |
| Relative Humidity | 0 to 95% (non-condensing) |
| Weight | 1kg (2.2 lbs) |
| Dimensions (H×W×T) | 220×110×70mm (8.7×4.3×2.7 inch) |

## Functional Module Specifications

### Visible Fault Locator Module[5]

| | |
|---|---|
| Wavelength (±20nm) | 650nm |
| Output Power (dBm) | ⩾-3 |
| Max Measurement Range | 5 Km |

### Stabilized Laser Source Module[5]

| | |
|---|---|
| Wavelength (±20nm) | Same as OTDR working wavelength[5] |
| Output Power (dBm) | ⩾-7 |

### Optical Power Meter Module[5]

| | |
|---|---|
| Calibrated Wavelength (nm) | 850,1300,1310,1490,1550,1625 |
| Power Range (dBm) | -70 to +6 (-60 to +6 @ 850nm) |
| Detector Type | InGaAs |
| Display Resolution | 0.01dB |
| Accuracy | ± 5% ± 0.01nW (±0.5dB@850nm) |
| MOD Identification | 1K, 2K Hz |

### PON Power Meter Module[6]

| Calibrated Wavelength | 1310nm | 1490nm | 1550nm |
|---|---|---|---|
| Measurement Range (dBm) | -40 to +8 (Burst mode: -30 to +8) | -40 to +8 | -40 to +20 |
| Spectral Passband (nm) | 1310±40 | 1490±10 | 1550±10 |
| Power Uncertainty (dB) | ⩽ 0.5 | | |
| Display Resolution (dB) | 0.01 | | |
| Insertion Loss (dB) | ⩽ 1.5 | | |
| Threshold | 60 user-definable threshold sets | | |
| Data Storage | 1200 records | | |

| MCI100 Optical Connector Inspector Module | |
|---|---|
| Zoom | 250X |
| Resolution | 0.75µm |
| Focus | Manual |
| Adpator | Standard: 25-U-M: FC/SC/ST/E2000 UPC male;<br>125-U-M: LC/MU UPC male;<br>25-U-F: FC/SC/ST/E2000 UPC female;<br>LC-U-F: LC UPC female;<br>Optional: 125-A-M: LC/MU APC male;<br>25-A-M: FC/SC/ST/E2000 APC male;<br>SC-A-F: SC APC female;<br>FC-A-F: FC APC female;<br>LC-A-F: LC APC female; |
| Weight / Size | 150g/ 165×38×35mm |

\* Specifications subject to change without notice

**Notes:**

(1) Specifications describe the instrument's warranted performance, measured with typical PC-type connectors. Uncertainties due to the refractive index of fiber are not considered.

(2) The dynamic range is measured at maximum pulse width and averaging time of 3 minutes.

(3) Conditions for dead zone measurement: Reflection event is at 0.6Km, reflection intensity is less than -45dB, event dead zone is measured with pulse width of 10ns; attenuation dead zone is measured with pulse width of 10ns.

(4) 1625nm can be replaced by 1650nm.

(5) Visible fault locator module, Stabilized laser source module and Optical power meter module is standard on -VPSI models. Stabilized laser source shares palmOTDR optical port and work on the same working wavelength of palmOTDR.

(6) PON power meter module is standard on P11C and P31C.

## Order Information

**Standard Package Includes:**

Instrument, FC/PC connector, NiMH battery, TraceManager software CD, USB Data cable, AC adaptor, Soft carrying case, Warranty card, Certificate of calibration, Quick reference guide.

**Options:**

- palmOTDR-XXXX-VPSI: Visible Fault Locator module, Optical Power Meter module, Stabilized Laser Source module and Optical Connector Inspector Module for palmOTDR
- MCI100 Module: Optical Connector Inspector
- LM100 Function: LinkImage software