

# palmOTDR Series Handheld OTDR



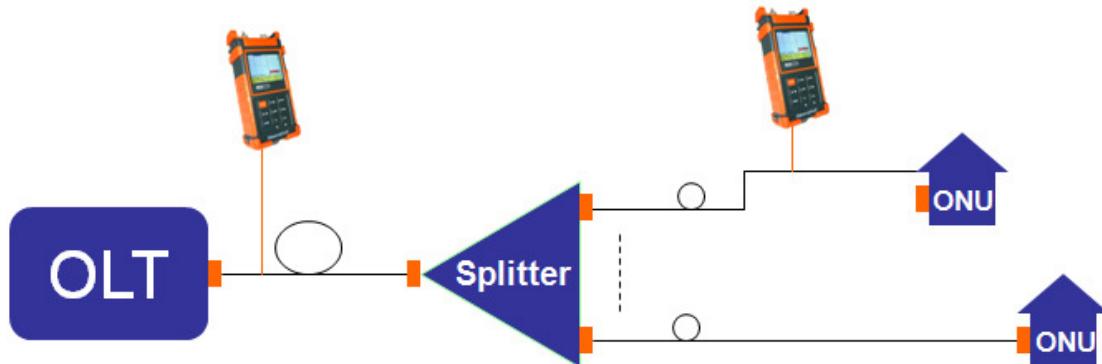
## Most Compact High-Performance OTDR

- ◆ 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
- ◆ 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/RS-232 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

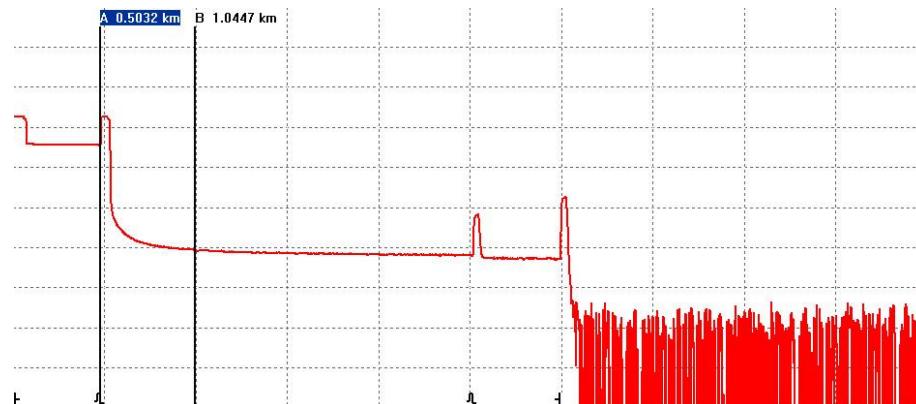


The compact palmOTDR now offers even more testing capacities, flexibility and value with combination of 850/1300/1310/1490/1550/1625/1650nm (Mono/double/triple wavelength) OTDR, 1310/1490/1550nm PON Power Meter, Stabilized Laser Source and VFL. The OTDR wavelengths cover the applications of regular end-to-end 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.

- In-service testing (1625nm with filter)

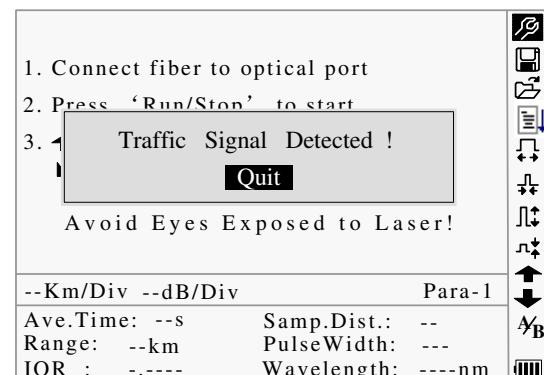


- Testing through splitter, splitter and fiber end identifiable



### 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.



### Optional Stabilized Laser Source

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

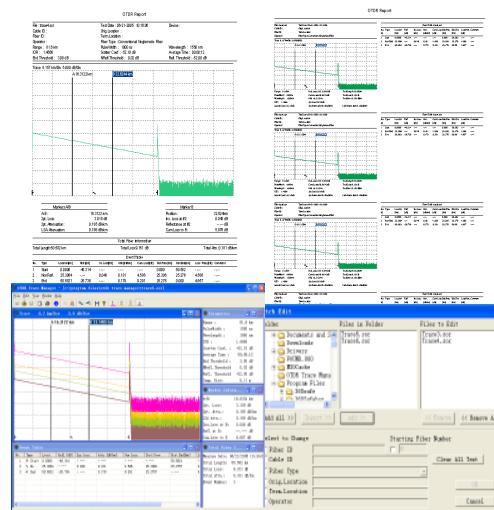
### Optional Optical Power Meter

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

### OTDR TraceManager 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



## General Specifications

Model <sup>(1)</sup>	Wavelength ( $\pm 20\text{nm}$ )	Dynamic Range <sup>(2)</sup>	Event DeadZone(m) <sup>(3)</sup>	Attenuation DeadZone(m) <sup>(3)</sup>
palmOTDR-M20AE	850/1300	21/24dB	1.8	8
palmOTDR-S20AE+	1310/1550	32/30dB	1.8	8
palmOTDR-S20BE	1310/1550	35/34dB	1.8	8
palmOTDR-S20C/N	1310/1550	40/38dB	1.5	8
palmOTDR-S20D/N	1310/1550	45/43dB	1.5	8
palmOTDR-S20F	1310/1550	50/48dB	1.5	8
palmOTDR-S20C/P	1310/1490/1550	38/37/37dB	1.5	10
palmOTDR-S20C/X	1310/1550/1625	38/37/37dB	1.5	10
palmOTDR-S20C/E	1310/1550/1650	38/37/37dB	1.5	10
palmOTDR-P11C (w. PPM module)	1625	37dB	1.5	10
palmOTDR-P13C (w. PPM module)	1650	37dB	1.5	10
palmOTDR-P31C (w. PPM module)	1310/1550/1625	38/37/37dB	1.5	10
palmOTDR-P33C (w. PPM module)	1310/1550/1650	38/37/37dB	1.5	10
Selectable Range (Km) <sup>(4)</sup>	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 <sup>(5)</sup>	10ns,30ns,100ns,300ns,1 $\mu$ s@850nm; 10ns,30ns,100ns,300ns,1 $\mu$ s,2.5 $\mu$ s@1300nm; 5ns,10ns, 30ns,100ns, 300ns,1 $\mu$ s,2.5 $\mu$ s,10 $\mu$ s,20 $\mu$ s@others			
Averaging Time	Quick, 15s, 30s, 1min, 2min, 3min			
Distance Measure Accuracy	$\pm(1\text{m} + 5 \times 10^{-5} \times \text{distance} + \text{sampling space})$			
Attenuation Detect Accuracy	$\pm 0.05 \text{ dB/ dB}$			
Reflection Detect Accuracy	$\pm 4 \text{ dB}$			
Data Storage	1000 records			
Connectivity	USB/RS-232			
Connector	FC/PC(Interchangeable SC, ST)			
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 ~ 50°C			
Storage Temperature	-40°C ~ 70°C			
Relative Humidity	0~95% (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 <sup>(6)</sup>	
Wavelength ( $\pm 20\text{nm}$ )	650nm
Output Power (dBm)	$\geq -3$
Max Measurement Range	5 Km
Stabilized Laser Source Module <sup>(7)</sup>	
Wavelength ( $\pm 20\text{nm}$ )	Same as OTDR working wavelength <sup>(8)</sup>

Output Power (dBm)	≥-7		
<b>Optical Power Meter Module<sup>(9)</sup></b>			
Calibrated Wavelength (nm)	850,1300,1310,1490,1550,1625		
Power Range (dBm)	-70 ~ +6 (-60 ~ +6 @ 850nm)		
Detector Type	InGaAs		
Display Resolution	0.01dB		
Accuracy	± 5% ± 0.01nW (±0.5dB@850nm)		
MOD Identification	1K, 2K Hz		
<b>PON Power Meter Module<sup>(10)</sup></b>			
Calibrated Wavelength	1310nm	1490nm	1550nm
Measurement Range (dBm)	-40 ~ +8 (Burst mode: -30 ~ +8)	-40 ~ +8	-40 ~ +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		

\* 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 within 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 (type A with 12ns); attenuation dead zone is measured with pulse width of 30ns.
- (4) Among the selectable ranges 160 and 240km are only for type B, C & D; 120Km is only for type A.
- (5) Among the pulse widths 5ns, 10ns, 300ns, 10μs and 20μs are only available for type B, C & D;
- (6) Visible fault locator module is standard on S20BE, S20C/N, S20D/N and S20F; optional on M20AE, S20AE, S120A, S120B, S20C/P, S20C/X, S20C/E, P11C and P13C.
- (7) Stabilized laser source module is optional on all models.
- (8) Stabilized laser source shares palmOTDR optical port and work on the same working wavelength of palmOTDR.
- (9) Optical power meter module is optional on M20AE, S120A, S120B, S20AE, S20BE, S20C/N, S20D/N, S20C/P, S20C/X and S20C/E.
- (10) PON power meter module is standard on P11C, P13C, P31C and P33C.

#### Ordering Information

##### Standard Package Includes:

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

##### Options:

1. *palmOTDR-XXX-V* Visible Fault Locator module for palmOTDR
2. *palmOTDR-XXX-P* Optical Power Meter module for palmOTDR
3. *palmOTDR-XXX-S* Stabilized Laser Source module for palmOTDR

