

SunLite OTDR

Mini OTDR for FTTx/PON and Metro fiber networks

SunLite OTDR is a lightweight, handheld mini OTDR optimized for the installation and troubleshooting of FTTx, PON, CATV, Mobile Backhaul, and Metro fiber networks. Power meter, light source, fiber inspection probe and VFL test options add versatility to the unit.



Platform Highlights

- Robust, compact handheld design for demanding test environments
- High resolution, 3.5" TFT color screen viewable in any lighting conditions
- Fast boot-up time essential for fiber restoration
- Intuitive display and simple function keys for easy operation
- High-capacity internal data storage (>1,000 traces)
- USB-A Host Interface for USB flash drives and fiber inspection probe connection
- USB-B Client Interface to transfer OTDR test data or perform software upgrades
- Rechargeable Li-Ion battery with capacity indicator, low voltage alarm and Auto-off function
- Continuous operation of > 9 hours exceeding Bellcore TR-NWT-001138 recommendations

Key Features

- FTTx/PON optimized parameters for best dead zones for 1xN splitters and normal reflective events
- Live OTDR port for in-service measurements and live fiber detection with embedded power meter
- Dynamic range up to 38 dB
- Event dead zone < 1m, attenuation dead zone < 4m
- Single, dual, triple, and quad wavelength options - 850 nm, 1300 nm, 1310 nm, 1490 nm, 1550 nm and 1625 nm
- Telcordia GR-196 and SR-4731.sor file formats
- Generate and save traces in .sor or pdf format
- Novice mode with automated trace diagnostics, one-button setup and events detection
- Manual OTDR mode – user controls all setup and measurement parameters manually
- Dual markers for distance, attenuation and splice loss measurements
- Universal 2.5 mm optical interfaces with inter-changeable optical adaptors (SC/FC/ST/LC)
- Optional power meter, light source, fiber inspection probe and VFL

Loads of features you can depend on

Fast Startup

The SunLite OTDR powers up and is ready to perform measurements in less than 10 seconds, making it one of the fastest units in the industry. Technicians can start to work almost immediately or be in the position to locate and restore fiber breaks quickly.

Novice Mode

Test parameters and measurements are fully automated and optimized, so even “OTDR beginners” can test quickly and efficiently. The unit determines total fiber length, total link loss, fiber attenuation and generates full event table (using 3 pulse widths).

Advanced Analysis for Experts

OTDR test parameters can be set either manually or automatically depending on user.

The fiber trace is displayed and results are listed in an easy-to-read event table that compares fiber attenuation, splice loss and reflectance against user defined thresholds.

Users can then apply advanced LSA measurement techniques with 5 markers to further evaluate splices or to add/delete/edit optical events.

Powerful zooming functions remain at the user’s disposal to pinpoint faults with greater certainty and precision.

Software and event table displays locations of possible Macro bends when multi-wavelength measurements are performed.

Live Fiber Check

A test port check warns the user when the OTDR is connected to live fiber, preventing accidental overload and potential receiver damage. The unit automatically checks if light is present at the test interface prior to making measurement and will disable the transmitter if an active fiber detected.

Simple Software Upgrades

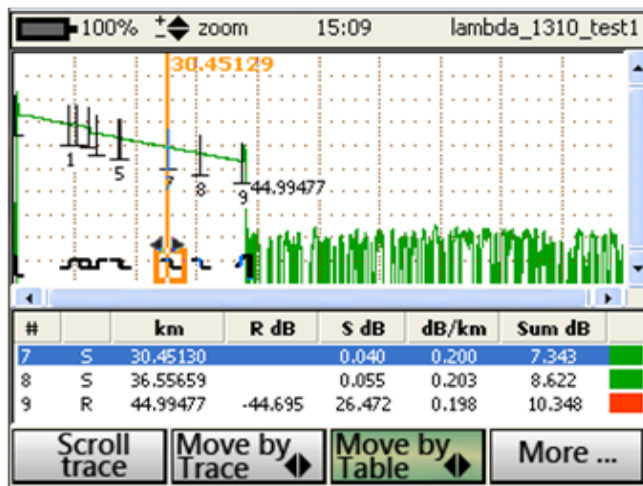
Firmware upgrades are performed easily via the USB-B Client port connected to a PC running Windows Mobile Device Center (WMDC). Updates are available at no charge for registered users from the VeEX website or through VeEX customer support.

Extended Battery Operation

The Sunlite OTDR provides up to 10 hours of operation on a single charge. A low voltage indicator warns the user when the device power reaches critical levels. A selectable Auto-off function shuts down the unit automatically in such conditions or when the unit is not in use conserving battery life.

Test Result Management

Traces can be saved in Telcordia GR-196 and SR-4731 .sor format to internal flash memory or external USB stick. Test files can be generated as a PDF report directly on the device with SOR source file/s attached.



Optical Specifications

SunLite OTDR	Multimode	Single mode
Wavelength (± 20 nm)	850/1300	1310/1550
Dynamic Range (db) ²	22/22	25/27
Pulse width (ns)	6, 25, 100, 300, 1000, 3000, 10000, 20000	
Event dead zone (m) ³	2	2
Attenuation dead zone (m) ⁴	10	10
Distance range (km)	0.5 to 80	0.5 to 240
Distance Measurement Accuracy (m) ⁵	$\pm (0.5 + \text{resolution} + 5 \times 10^{-5} \times L)$	
Sampling resolution (m)	0.16 to 7.6	
Sampling points	Up to 128,000	
Linearity (dB)	± 0.05	
Measurement time	User defined	
Memory capacity	>1,000 traces, Bellcore GR196 and Telcordia SR-4731 sor format	
Fiber analysis	Automatic, 3 Pulse widths, event table, user defined PASS/FAIL thresholds	
Fiber type	Multimode, 50/125 μm	Single mode, 9/125 μm
OTDR Laser safety	IEC 60825-1, Class 1M	
Optical connectors (OTDR)	Universal 2.5 mm interface, FC/SC/ST/LC adaptors optional	

SunLite OTDR	Multimode	Single mode
Wavelength (± 20 nm)	850/1300	1310/1490/1550//1625
Dynamic Range (db) ²	25/27	36/34/34//38
Pulse width (ns)	6, 25, 100, 300, 1000, 3000, 10000, 20000	
Event dead zone (m) ³	1	1
Attenuation dead zone (m) ⁴	4	4
Distance range (km)	0.5 to 80	0.5 to 240
Distance Measurement Accuracy (m) ⁵	$\pm (0.5 + \text{resolution} + 5 \times 10^{-5} \times L)$	
Sampling resolution (m)	0.16 to 7.6	
Sampling points	Up to 128,000	
Linearity (dB)	± 0.05	
Measurement time	User defined	
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Fiber type	Multimode, 50/125 μm	Single mode, 9/125 μm
OTDR Laser safety	IEC 60825-1, Class 1M	
Optical connectors (OTDR/VFL/OPM)	Universal 2.5 mm interface, FC/SC/ST/LC adaptors optional	

Options	Multimode	Single mode
Visual Fault Locator (VFL)	Optional	
-Wavelength (nm)	635 \pm 10 nm	
-Output (mW)	Max 1 mW	
-Laser Safety	IEC 60825-1, Class II	
Light Source (LS) - (O/P shared with OTDR)	Optional	
-Wavelengths (nm)	850/1300	1310/1490/1550
-Output power (dBm)	N/A	> -4
-Level Instability (dB)	N/A	Better than ± 0.05 (15 min)
Optical Power Meter (OPM)	Optional	
-Calibrated wavelengths (nm)	650/850	1310/1490/1550/1625
-Power range (dBm)	-60 to +3 / -40 to +23	-65 to +7 / -45 to +27
-Accuracy, %	± 8	± 5
-Linearity, %	± 6	± 2.5
Optical connectors (LS/VFL/OPM)	Universal 2.5 mm interface, FC/SC/ST/LC adaptors optional	

Notes:

1. Unless noted, all specifications are valid at 23°C ± 2°C (73.4°F ± 3.6°F) using FCUPC connectors
2. Typical dynamic range after three-minute averaging and SNR = 1
3. Typical dead zone using 6 ns pulse and reflections below -45 dB
4. Typical dead zone using 6 ns pulse and reflections below -45 dB
5. Excludes uncertainty due to fiber refractive index (IoR) setting

General Specifications

Dimensions	163 x 93 x 51 mm (*w/o rubber boot)
Weight	0.7 kg nominal
Battery	Lilon battery, 3400mAh with low voltage indication
Battery Autonomy	>9 hours continuous operation
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-40°C to 60°C (-40°F to 140°F)
Humidity	0% to 80%, non-condensing
Display	3.5" high resolution TFT 16 bit full color LCD
Interfaces	USB-A Host, USB-B Client
AC Adaptor	Input: 100-240 VAC (50/60 Hz), 1.5A max Output: 12VDC
Memory	Internal flash, 64 Mbyte
PC Connectivity	USB, ActiveSync, Windows Mobile Device Center (WMDC)
Languages	English, French, German, Spanish, Chinese, Japanese (others supported on demand)
Certifications	CE & ROHS compliant
Safety Standards	SunLite OTDR - IEC 61010-1, Class III (GOST 12.2.091) AC adaptor - IEC 61010-1, Class II (GOST 12.2.091)

Ordering Information

Handheld OTDR Models		Add on Hardware Options		
Wavelength (nm)	Dynamic Range (dB)	OPM	VFL	Light Source
1310/1550	27/25	Yes	Yes	1310/1550
850/1300	22/22	Yes	Yes	850/1300
1310/1550	36/34	Yes	Yes	1310/1550
1310/1550//1625 (Live)	36/34//38	Yes	No	1310/1550
1310/1490/1550	36/34/34	Yes	Yes	1310/1490/1550
1310/1490/1550//1625 (Live)	36/34/34//38	Yes	No	1310/1490/1550
850/1300	25/27	Yes	Yes	850/1300
850/1300/1310/1550 (Quad)	25/27//36/34	Yes	No	1310/1550

Add on Hardware Options
Standard OPM (+7 dBm)
High Power OPM (+25 dBm)
Visual Fault Locator
Light Source



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