SUNRISE TELECOM®
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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 field test environments
- High resolution, 3.5” TFT color touch-screen viewable in any lighting conditions
- Fast boot-up time essential for fiber restoration
- Intuitive display, simple function keys and touch-screen for fast navigation and easy operation
- High-capacity internal data storage (>1,000 traces) expandable with optional internal SD card
- 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
- Windows Mobile Device Center (WMDC) and Active Sync support to transfer fiber test data, upgrade software and remote control
- Bluetooth USB dongle support for pairing applications with Mobile Smartphones and Tablet PCs

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)
- Power meter, light source, fiber inspection probe and VFL options

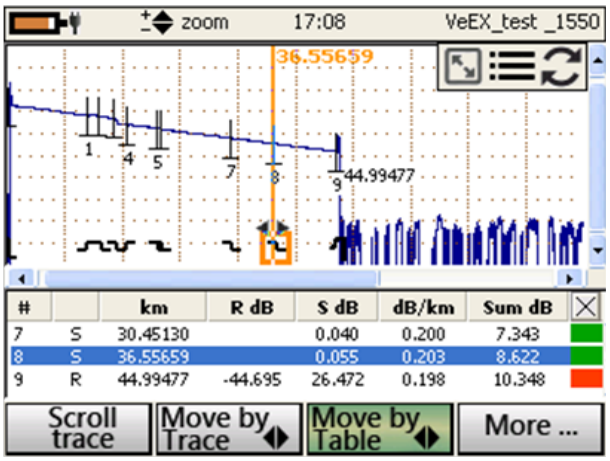
Loads of features you can depend on

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

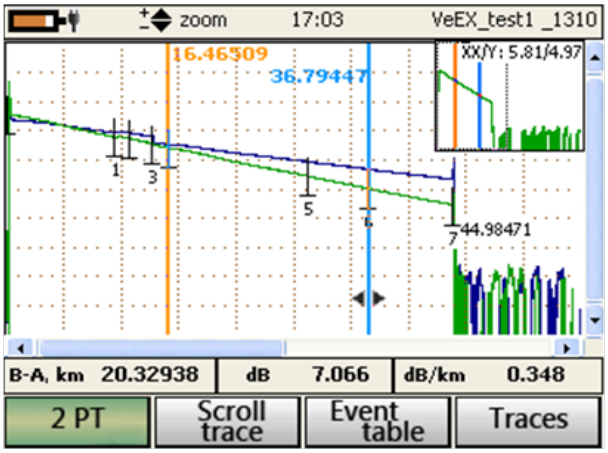
OTDR test parameters can be set either manually or automatically depending on user.

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 Macrobends when multi-wavelength measurements are performed.

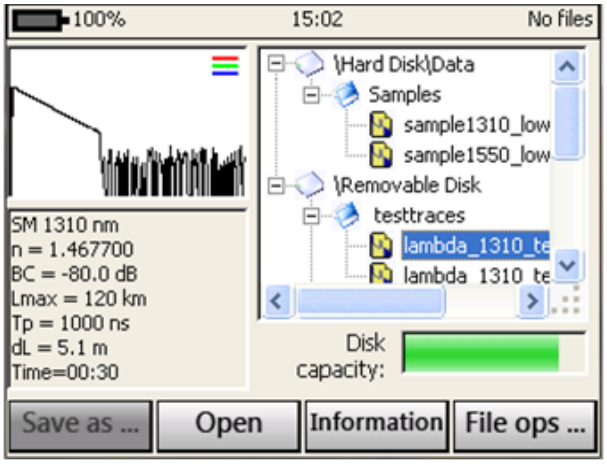


Live Fiber Check

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.

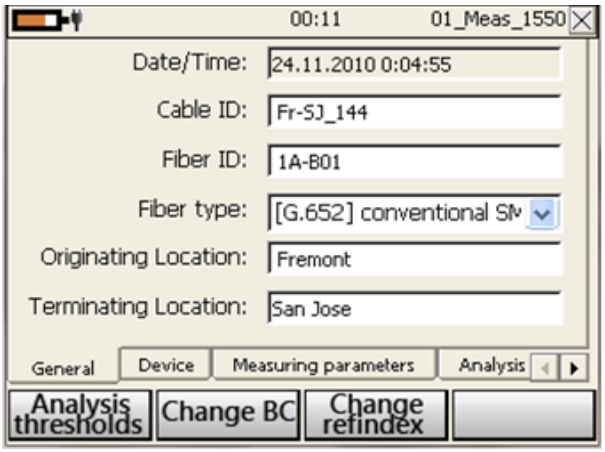
Test Result Management

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.



Cable and Fiber Information

Prior to or after acquiring a trace, the User can add location and other details regarding the Cable and Fiber being measured. Information common to all wavelengths such as Cable ID, Fiber ID, Origin/Terminating locations can be embedded with each trace. When saved as a template, this generic information will be re-applied to the new trace when the next acquisition is started, greatly reducing repetitive documentation operations.



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.

Extended Battery Operation

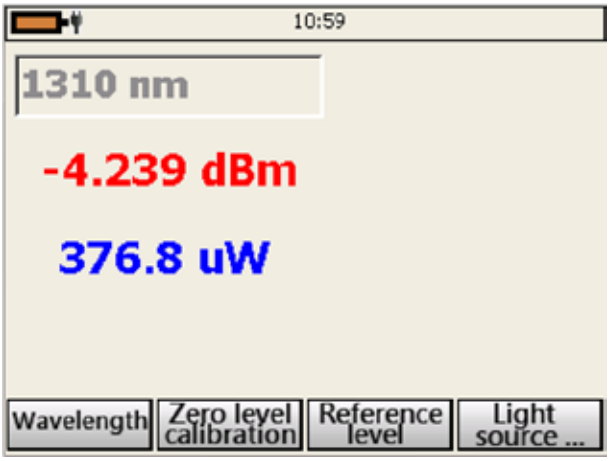
The Sunlite OTDR provides up to 10 hours of operation on a single charge. A low voltage indicator warns the user when the device power reaches critical levels.

Power Meter, Light Source and VFL Options

An optional power meter allows users to check the presence of optical signals, and perform accurate signal level measurements. Calibrated wavelengths for legacy transmission systems including newer PON systems are all available.

The OTDR port doubles as a stable source when the Light Source option is ordered. Used with the built-in OPM, the unit provides integrated loss test functionality.

An optional visible laser “red light” source allows users to visually troubleshoot splices, connectors and fiber management enclosures.



Fiberscope Option

The optional all-digital video Fiber microscope can be used to view the cleanliness of the optical connector’s surface and is perfectly suited for both in-adapter or male connector inspection. The probe connects directly to the OTDR’s USB2.0 port to obtain its power and to transfer images. Single finger focusing with a built-in image freeze/capture button simplifies operation.

The probe features inter-changeable heads and is supplied with bulkhead adapter tips for FC/PC, SC/PC, and LC/PC connector style, including male connector adapters.

The probe includes a free version of software for viewing connector end-face images which have been transferred and saved on a Windows® PC.

An optional software automatically analyzes the connector condition and provides a report with Pass/Fail criteria.

OTDR Trace Analysis and Documentation

Fiberizer™ Desktop

Fiberizer Desktop, is a standalone PC software application to analyze traces acquired by the Sunlite OTDR. Supplied as a standard accessory, Users can edit traces manually, create event tables, generate reports using built-in templates and much, much more.

This viewer displays trace files conforming to Telcordia (Bellcore) GR-196 & SR-4731 *.sor formats, and offers both 2-point and 5-point loss measurement modes. It also supports batch processing, a very useful feature for analyzing multiple fibers in a single cable.

The software does not require Internet access to operate, but it can be interfaced Fiberizer Cloud OTDR trace viewer at any time.

Work from Anywhere, Anytime

Fiberizer™ Cloud

Fiberizer Cloud, powered by Optixsoft, not only empowers the OTDR, but also the Workforce. Going way beyond traditional OTDR reporting methods or concepts, this cloud-based solution provides superior centralized test data management capabilities including powerful web based trace analyses. You can work from almost anywhere, at anytime because Fiberizer Cloud is a full online web service.

Add value with
Fiberizer Cloud
www.fiberizer.com

Streamlining onsite data reporting

Fiber technicians and contractors tasked to validate new fiber installations or restoring cable routes after an outage are generally obliged to submit measured data (.sor files) and related documentation to the network operator as proof of delivery before being paid. Valuable time however is often wasted after the onsite work is completed, because critical test files are usually first stored to some local storage media before being transferred to a colleague via email for verification and further reporting.

Fiberizer Cloud streamlines this information exchange, eliminating costly paper, e-mail or other time consuming communication methods - instead, time wastage can be avoided by transferring traces of jobs completed directly from the OTDR to Fiberizer Cloud. Professional PDF or MS Excel reporting functionality is also available, and users can create their own templates for reports. Bi-directional analysis of OTDR traces, tested from both ends of the optical fiber, can also be performed.

Fiberizer Cloud Connectivity

Pair the Sunlite OTDR via Bluetooth to a mobile Smartphone, Laptop or Tablet PC and efficiently upload test data directly to the Cloud server using any available wireless technology (3G, WiFi).

Total compatibility

Based on Microsoft Silverlight technology, Fiberizer Cloud is compatible with both Windows and MacOS browsers, not limiting users to PC platforms only. OTDR trace files in Telcordia (Bellcore) GR-196 & SR-4731 *.sor formats are securely transferred via HTTPS connection, a fast reliable communication protocol commonly used in today's Internet applications. Another outstanding feature is compatibility with other OTDR vendor trace data formats, so users can reference or compare other OTDR traces and vice versa.

PON scheme design

Design PON schemes and generate virtual OTDR traces for acceptance testing. Simple single lines to complex tree-structured PON networks/schemes can all be simulated using Fiberizer Cloud.

Peace of Mind

With Fiberizer cloud OTDR trace viewer you never need to install or update the application, thus reducing maintenance time and expenses. Fiberizer Cloud is constantly updated, so you always have the most up-to-date analysis capability for your fiber optic network.

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]	<1	<1
Attenuation dead zone (m)[4]	10	10
Distance range (km)	0.5 to 80	0.5 to 240
Distance Measurement Accuracy (m)[5]	± (0.5 + resolution + $5x10^{-5}$ x 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)	3, 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]	± (0.5 + resolution + $5x10^{-5}$ x 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/VFL/OPM)	Universal 2.5 mm interface, FC/SC/ST/LC adaptors optional	

Options	Multimode	Single mode
Visual Fault Locator (VFL)	Optional	
-Wavelength (nm)	650 nm ± 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 3 or 6 ns pulse and reflections below -45 dB
4. Typical dead zone using 3 or 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	LiIon 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 touchscreen LCD
Interfaces	USB-A Host, USB-B Client
AC Adaptor	Input: 100-240 VAC (50/60 Hz), 1.5A max Output: 15VDC
Memory	Internal flash, 64 Mbyte Internal SD card (optional)
Connectivity	USB, ActiveSync, Windows Mobile Device Center (WMDC), WiFi 802.11 b/gn (internal) Bluetooth (via USB dongle)
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 Soure
Fiber Microscope

VeEX
The Verification Experts

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