NOYES®
OFL250 Hand-held, Fault-Locating OTDR

Features

- Cost-effective 1550 or 1310/1550 nm troubleshooting OTDR
- 26 dB dynamic range; 1.5 m event dead zone
- Integrated source, power meter, visual fault locator
- Easy pass/fail analysis using link length, link loss, ORL summary
- Rugged, hand-held and light weight
- Internal storage (>1000 OTDR traces in standard .SOR format)
- Transfer test results to a PC via USB
- All-day battery operation without recharge or replacement
- Windows® compatible software to view, print, and archive test records
- Instant On; Ready to test in <5 seconds

Applications

- **Troubleshoot metro/access optical networks:** Locate cable cuts, poor splices, fiber bends, and dirty or damaged connections.
- **Measure optical power:** Verify TX output or RX input power levels.
- **Complete multi-wavelength end-to-end loss tests** faster and eliminate setup errors using AFL's Wave ID loss test feature.
- **Identify fibers** utilizing laser source to generate tones detected by NOYES non-intrusive Optical Fiber Identifiers
- **Generate stable optical source signals** (CW, Wave ID or fiber-identifying tones) using the integrated Optical Laser Source.
- **Visibly trace fibers** or locate fiber bends or breaks using the integrated Visual Fault Locator (VFL) visible red laser.

The NOYES OFL250 is a single-mode OTDR with an integrated optical power meter, optical laser source, and visual fault locator (VFL) in a hand-held package weighing only 0.8 kg (1.8 lb). With short dead zone and mid-range dynamic range performance, the OFL250 is ideal for troubleshooting single-mode fibers in local access and metro area networks. For quick pass/fail fiber analysis, the ORL upgrade option provides a convenient end-to-end fiber summary including link length, link loss, and ORL.

Integrated source and power meter include AFL's unique Wave ID capability to eliminate setup errors and reduce test time by up to 80%. With Wave ID, the power meter automatically synchronizes to a single or multi-wavelength Wave ID optical signal sent from a Wave ID source connected to the other end of the link.

Over 1000 OTDR test results may be saved in industry-standard .SOR file format. Transfer stored OTDR results to PC via USB for viewing and professional report generation using included Windows compatible TRM® 2.0 Basic Test Results Manager software.

OFL250 OTDRs are offered in two models to suit your application requirements:

- **OFL250-100:** 1310/1550 nm Single-mode OTDR; Ideal for installation and maintenance testing of point-to-point access and metro area networks operating at 1310 and/or 1550 nm.
- **OFL250-50:** 1550 nm only Single-mode OTDR; Cost-effective solution for fault-locating single-mode networks at 1550 nm only, including detection of high losses due to micro- or macro-bends.

FOLS FIBER OPTICS LAN SECTION · Bicsi CORPORATE MEMBER · FTTH COUNCIL

NOYES®
OFL250 Hand-held, Fault-Locating OTDR

Specifications [a]

OTDR (POINT-TO-POINT, PON, LIVE PON)	
Emitter Type	Laser
Safety Class	Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03
Fiber Type	Single-mode
Available Wavelengths	1310/1550 nm
Wavelength Tolerance	±20/±20 nm
Dynamic Range (SNR=1) [b]	26/26 dB
Event Dead Zone [c]	1.5 m
Attenuation Dead Zone [d]	6.5/7 m
Pulse Widths	5, 10, 30, 100, 300 ns, 1, 3, 10 µs
Range Settings	250 m to 256 km
Data Points	Up to 16,000
Data Point Spacing	12.5 cm (range ≤4 km), Range/16,000 (range >4 km)
Group Index of Refraction	1.4000 to 1.6000
Distance Uncertainty (m)	±(1 + 0.005 % x distance + data point spacing)
Linearity	± 0.05 dB/dB
Trace File Format	Bellcore GR-196 V.1.1
Trace File Storage Medium	Internal memory (>1000 traces)
Data Transfer to PC	USB cable
OTDR Modes	Full Auto, End Locate, Expert, Real Time

OPTICAL POWER METER (OPM)	
Calibrated Wavelengths	1310, 1490, 1550, 1625, 1650 nm
Detector Type	InGaAs
Measurement Range	+23 to -50 dBm
Tone Detect Range	+3 to -35 dBm
Wavelength ID Range	+3 to -35 dBm
Accuracy [e]	±0.25dB
Resolution	0.01 dB
Measurement Units	dB, dBm or Watts (nW, µW, mW)

OPTICAL LIGHT SOURCE (OLS)	
Emitter Type	Laser
Safety Class	Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03
Fiber Type	Single-mode
Available Wavelengths	1310, 1550 nm
Wavelength Tolerance	±20 nm
Spectral Width (FWHM)	5 nm (maximum)
Internal Modulation	1 kHz, 2 kHz, CW
Wavelength ID (one, two, or three wavelengths)	Compatible with NOYES Optical Power Meters and Light Sources
Output Power Stability [f]	<±0.25 dB
Output Power (nominal)	–3 dBm ±1.5 dB

VISUAL FAULT LOCATOR (VFL)	
Emitter Type	Visible red laser
Safety Class	Class II FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03
Wavelength	650 nm ±20 nm
Output Power (nominal)	0.8 mW into single-mode fiber

GENERAL	
Size (in boot)	20.1 x 13.0 x 5.3 cm (7.9 x 5.1 x 2.1 in)
Weight	0.8 kg (1.8 lb)
Operational Temperature	-10°C to +50°C, 0 to 95 % RH (non-condensing)
Storage Temperature	-20°C to +60°C, 0 to 95 % RH (non-condensing)
Power	Rechargeable Li-Ion or AC adapter
Battery Life	12 hours, backlight ON, continuous operation
Display	LCD, 320 x 240, 3.5 inch (89 mm), color, high-performance transflective with backlight and AR coating

Notes:

a. All specifications valid at 25°C unless otherwise specified.
b. Measured using 240 km range, 10 µs pulse and 3 min averaging.
c. Typical distance between the two points 1.5 dB down each side of a reflective spike caused by a -45 dB event using 5 ns pulse width.
d. Typical distance from the location of a -45 dB reflective event to the point where the trace falls and stays within 0.5 dB of backscatter, using a 5 ns pulse width.
e. At calibration wavelengths and power level of approximately -10 dBm.
f. Over 15 minutes after 30 minute warm-up.

NOYES®
OFL250 Hand-held, Fault-Locating OTDR

Ordering Information

Each OFL250 OTDR comes with a soft carry case, (1) SC and (1) FC adapter for the OTDR/OLS port, Universal 2.5 mm adapters for the OPM and VFL ports, One-Click cleaner (2.5 mm), USB cable (connects with Type A USB port on your PC), rechargeable, replaceable Li-Ion battery, quick reference guide, TRM® 2.0 Basic Test Results Manager software for Windows-compatible PCs and AC power adapter with country-specific power cord.

MODEL	DESCRIPTION	AFL NO.
OFL250-100	1310, 1550 nm OTDR and OLS with OPM and VFL	OFL2-26-0910PR
OFL250-50	1550 nm OTDR and OLS with OPM and VFL	OFL250-50U-ENG
OFL250-ORL	ORL Upgrade – Adds Fiber Summary with link length, link loss and ORL	OFL250-ORL
TRM-Advanced	TRM 2.0 Advanced Upgrade -- Adds macrobend detection and bi-directional OTDR averaging	TRM-00-0920PR

Calibration Plans

AFL recommends annual calibrations on NOYES Test and Inspection products. Prepaid Cal plans offer two annual calibrations at a discounted price, a convenient calibration expiration email service, express calibration services and access to the NOYES product knowledge base. Cal Plus plans offer the same services as the Cal plans with the addition of a two year extended warranty (three years total coverage).

OFL250 MODEL	2 YR CAL PLAN	2 YR CAL PLUS PLAN
OFL250-100	CAL2-00-OFL250-100	CAL2-01-OFL250-100
OFL250-50	CAL2-00-OFL250-50	CAL2-01-OFL250-50

Available Accessories

DESCRIPTION	AFL NO.
TEST PORT ADAPTERS	
FC adapter for OTDR / OLS port	2900-50-0002MR
SC adapter for OTDR / OLS port	2900-50-0003MR
ST adapter for OTDR / OLS port	2900-50-0004MR
LC adapter for OTDR / OLS port	2900-50-0006MR
FC adapter for OPM port	2900-52-0001MR
SC adapter for OPM port	2900-52-0002MR
ST adapter for OPM port	2900-52-0003MR
LC adapter for OPM port	2900-52-0004MR
2.5 mm Universal adapter for OPM port	2900-52-0005MR
1.25 mm Universal adapter for OPM port	2900-52-0006MR
1.25 mm Universal adapter for VFL port	2900-53-0002MR
2.5 mm Universal adapter for VFL port	2900-53-0001MR

DESCRIPTION	AFL NO.
REPLACEMENT ACCESSORIES	
Replacement dust cap for port adapter	8800-00-0072PR
Replacement soft carry case	1400-01-0045
Hard carry case; sized to include Fiber Rings, cleaning supplies, FOCIS inspection system	1400-01-0098PZ
Replacement cable, USB-Mini B	6000-00-0024MR
Replacement AC adapter and battery charger	4050-00-0127PR
Li-Ion battery charger, 90-260 VAC	4050-30-0005MR
Vehicle charger/supply, 15 V, 5.0 A, 75 W	4050-00-0123PR
Replacement Li-Ion battery pack	3900-05-0003ME
FIBER RINGS (USE AS LAUNCH OR RECEIVE/TAIL FIBERS)	
Fiber Ring, single-mode, 150 m	FR1-SM-150-y1-y2
Fiber Ring, single-mode, 500 m	FR1-SM-500-y1-y2
Fiber Ring, single-mode, 1000 m	FR1-SM-1000-y1-y2

y1, y2 – connectors for single-mode cables, specify type as follows:
ST, SC, ASC (angled SC), FC, AFC (angled FC), LC.
Other connector types, fiber types, and fiber lengths quoted upon request.

NOYES International Sales and Service Contact Information

Available at www.AFLglobal.com/NOYES/Contacts