



Test & Inspection

OTDRs

Microscopes

Loss Test Sets

Power Meters

Cleaning Supplies

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AFL Telecommunications' Noyes Test & Inspection Equipment product line offers a comprehensive set of fiber optic test equipment for measuring, maintaining and documenting the performance of fiber optic networks. In every area of manufacturing, AFL Telecommunications combines the latest equipment, production techniques and test systems to create products with world-class performance.



M200 Handheld OTDR

The Noyes M200 from AFL Telecommunications offers unmatched OTDR capabilities in a handheld package weighing less than 1 kg (2 lb). Multimode, Single-mode, and 'Quad' wavelength models are offered. With short dead zone and intermediate range specifications, the M200 is ideal for Tier 2 testing of premises (building and campus) networks or certification and troubleshooting of FTTX PON networks. And its bright, transfective display makes it suitable for both indoor and outdoor operation.

The M200 is based on a new hardware/software platform that supports automatic and manual setup, precision event analysis, dual-wavelength testing, fiber identification using Noyes 'TR' test receivers, rich file naming and folder setup, 6 hour battery life, internal and removable media data storage, and USB connectivity. Test ports are equipped with tool-free adapters, which can be changed in seconds. A custom-designed polycarbonate case and shock-absorbing boot make it our most rugged OTDR ever.

Results are saved as industry standard .SOR files, which can be viewed, printed, and analyzed on a PC using free-ware available to you and your customers (go to www.afltele.com to download). Unit firmware, user settings, and test results are saved in non-volatile memory. Thus the M200 may be stored with battery removed for an extended period of time and still be up and running in seconds when needed.

Features

- Handheld, 0.9 kg (2 lb)
- 850/1300/1310/1550 nm
- 1.5 m (typ.) event dead zone
- 22 dB (MM), 26 dB (SM) dynamic range
- Integrated VFL (650 nm)
- Tool-free, switchable adapters (ST/SC/FC)
- Bellcore (GR-196) .SOR file format
- CompactFlash™ memory card
- Tool-free Lilon battery (6 hour life)
- Transfective (indoor/outdoor) touch-screen display

Applications

- Tier 2 testing of premises networks
- FTTX PON certification and troubleshooting
- Fast fault location
- Splice verification
- Network documentation



Ordering Information

MODEL NUMBER	DESCRIPTION	TEST PORT ADAPTERS
M200-K-QUAD	850/1300 nm multimode and 1310/1550 nm single-mode OTDR	(2) ST, (2) SC, and (1) FC
M200-K-MM	850/1300 nm multimode OTDR	ST and SC
M200-K-SM	1310/1550 nm single-mode OTDR	SC and FC

All models include a rugged, soft-sided carry case with shoulder strap, 110/220 VAC power adapter with country-specific power cord, and user guide.

M200 Handheld OTDR

Specifications

OTDR SPECIFICATIONS		
	MULTIMODE	SINGLE-MODE
Emitter Type	Laser	
Safety Class	Class 1 FDA 21 CFR 1040.0 & 1040.11	
Center Wavelengths	850/1300 nm	1310/1550 nm
Wavelength Tolerance	± 20 / ± 30 nm	± 20 / ± 30 nm
Dynamic Range (SNR = 1)	22 dB	26 dB
Event Dead Zone ¹	1.5 m	1.5 m
Attenuation Dead Zone ²	9 m	9 m
Pulse Widths ³	10, 30, 100, 300 ns, 1, 3 μs	10, 30, 100, 300 ns, 1, 3, 10 μs
Range	250 m to 64 km	250 m to 208 km
Data Points	Up to 16,000	Up to 16,000
Data Point Spacing	0.25 m (range ≤ 4 km) Range/16000 (range ≥ 8 km)	
Group Index of Refraction (GIR)	1.4000 to 1.6000	
Trace File Format	Bellcore GR-196 Version 1.1	
Trace File Storage Medium	Internal, non-volatile memory and removable Compact Flash Card	
Trace File Storage Capacity	> 100 internal; thousands on Compact Flash	
Distance Uncertainty (m)	± (1 + 0.005% x distance + data point spacing)	
VISUAL FAULT LOCATOR SPECIFICATIONS		
Emitter Type	Laser	
Safety Class	Class II FDA 21 CFR 1040.10 & 1040.11; IEC 825-1:1993, EN60825-1:1994	
Wavelength	650 nm	
Output Power (nominal)	0.8 mW	
GENERAL SPECIFICATIONS		
Size (in boot)	23 x 11 x 7 cm (8.8 x 4.3 x 2.8 inches)	
Weight	0.9 kg (2 lb)	
Operating Temperature	-10 to +50 °C	
Storage Temperature	-20 to +60 °C	
Relative Humidity	0 to 95% RH (non-condensing)	
Power	Removable LiIon or 110/220 VAC power adapter	
Battery Life ⁴	6 hours	
Recharge Time ^{4&5}	3 hours	

All specifications are subject to change.

All specifications valid at 23°C ± 2°C (73.4°F ± 3.6°F) unless otherwise specified.

1. Typical distance between the two points 1.5 dB down each side of a reflective spike caused by a -40 dB (Multimode) or -45 dB (single-mode) event using 10 ns pulse width.
2. Typical distance from event location to point where trace is within 0.5 dB of backscatter.
3. 3 μs pulse width not available at 850 nm.
4. New battery.
5. Typical, from fully discharged to fully charged state, unit may be operating.



OFL-200 Single-Mode OTDR

Smaller than many optical loss test sets, the OFL-200 has the range, features, and price to make it the perfect OTDR for outside plant crews installing and maintaining optical fiber cables in broadband, metro, access, and FTTH networks. The OFL-200 is a true OTDR, it detects fiber backscatter as well as fresnel reflections. The OFL-200 can locate reflective and non-reflective breaks, including those caused by crushed fibers. In addition, the OFL-200 provides an integrated 650 nm visual fault locator (VFL) for short-distance troubleshooting and fiber tracing. In [Full Auto] mode, the OFL-200 measures fiber length and sets range, pulse width, and averaging time automatically. [Full Auto] mode is ideal for operators not familiar with OTDRs. [Semi Auto] mode allows the user to set range while the OFL-200 sets all other parameters. [Manual] mode is available for experienced users. [Live] mode is provided for first connector checking and troubleshooting. The fast-change switchable adapter allows the OFL-200 to interface launch cables with a variety of connector styles. The OFL-200 can internally store up to 48 traces. Using the supplied serial cable, saved traces can be transferred to a PC for archiving, printing, and analyzing with the supplied Trace600 Windows® software. Test results are stored in Bellcore [* .sor] GR-196 Version 1.1 format

Features and Applications

- Designed for field use, rugged, handheld
- 1550 nm single-mode OTDR
- > 70 km effective range
- Cursor and zoom controls to measure event loss, reflectance, and location
- Launch level connection quality indicator

Ordering Information

MODEL: OFL-200

Unit with SC and FC adapter caps (ST and LC available), universal AC power adapter, country-specific line cord, manual, and carry case.

Specifications

OTDR	
Emitter type	Laser
Safety class	Class I, FDA 21 CFR 1040.10 & 1040.11
Center wavelength (nominal)	1550 nm
Dynamic range (SNR = 1)	24 dB @ 10 μs, 3 min. test
Event dead zone 1	2 m typical / 3 m maximum
Attenuation dead zone 2	14 m typical / 18 m maximum
Number of data points	4000 on ranges ≥ 4 km
Resolution	1 m on ranges ≤ 4 km; Range / 4,000 on ranges > 4 km

VISUAL FAULT LOCATOR (VFL)	
Emitter type	Laser
Safety class:	Class II, FDA 21 CFR 1040.10 & 1040.11 IEC 825-1: 1993, EN60825-1: 1994
Wavelength	650 nm
Output power (nominal)	0.8 mW into 9 μm single-mode optical fiber

GENERAL	
Size (H x W x D)	190 x 112 x 47 mm (7.5 x 4.4 x 1.9 inches)
Weight	0.6 kg (1.3 lb)
Operating temperature	-10 oC to + 50 oC, 0 to 95% RH (non-condensing)
Storage temperature	-20 oC to + 60 oC, 0 to 95% RH (non-condensing)
Power	Rechargeable NiMH or AC adapter. Optional 4 x AA Alkaline
Battery life with backlight ON	NiMH > 8 hours; 4 x AA: > 13 hours

1 1.5 dB down from each side of the peak, -45 dB reflective event
2 From the start of an event to within 0.5 dB of backscatter, -45 dB reflective event



Fiber Ring (150 m)

Fiber Rings and Fiber Boxes

OTDRs require launch and receive test cables to measure the end-to-end loss of optical fiber links. A launch cable, which connects the OTDR to the link under test, reveals the insertion loss and reflectance of the near-end connection. A receive cable, which is connected to the far-end of the link, reveals the insertion loss and reflectance of the far-end connection. Noyes OTDR test cables are available in two forms. Fiber Rings, which provide 150 m of 50 μm , 62.5 μm , or single-mode fiber in a compact, light-weight ring, are ideal for testing optical fiber links (up to about 2 km) in premises networks. Fiber Boxes, which are available in standard lengths up to 1 km, are ideal for testing single-mode fiber spans (up to 50 km or longer) in Telco and Broadband networks.



Fiber Box (1 km)

Fiber Rings (FR) Specifications

MODEL	CONFIGURATION	FIBER TYPE	FIBER LENGTH
FR1-M5-150-x1-x2	Standard, one fiber	Multimode, 50 μm	150 m (492 ft)
FR1-M6-150-x1-x2	Standard, one fiber	Multimode, 62.5 μm	150 m (492 ft)
FR1-SM-150-y1-y2	Standard, one fiber	Single-mode	150 m (492 ft)
FR3-M5-x1-MTRJ	MT-RJ near-end, A and B fibers	Multimode, 50 μm	150 m (492 ft)
FR3-M6-x1-MTRJ	MT-RJ near-end, A and B fibers	Multimode, 62.5 μm	150 m (492 ft)
FR3-SM-x1-MTRJ	MT-RJ near-end, A and B fibers	Single-mode	150 m (492 ft)

Fiber Boxes (FB) Specifications

MODEL	CONFIGURATION	FIBER TYPE	FIBER LENGTH
FB1-SM-500-y1-y2	Standard, one fiber	Single-mode, SMF-28	500 m (1640 ft)
FB1-SM-1000-y1-y2	Standard, one fiber	Single-mode, SMF-28	1000 m (3281 ft)

x1, x2 — connectors for multimode cables, specify type (e.g. ST, SC)

y1, y2 — connectors for single-mode cables, specify type (e.g. ST, SC, FC)

Other connector types, fiber types, and fiber lengths will gladly be quoted upon request



TR Series OTDR Test Receivers

A TR Series OTDR Test Receiver allows a single technician, equipped with an OTDR, to test multiple fibers terminating at a common location with only one visit to that location. A TR unit can greatly reduce the time need to test and certify the connectivity of FTTH passive optical networks (PON) or high-fiber-count, point-to-point spans. TR12 and TR24 OTDR Test Receivers house 12 or 24 OTDR receive fibers respectively, with lengths increasing in 20-foot increments, in a compact, shock-resistant chassis. TR12 and TR24 units are equipped with 12 or 24 SC/APC ports.

Ordering Information

MODEL	INCLUDES
TR12-K1-SC-ASC	(1) TR12 OTDR Test Receiver (1) Soft-sided carry case
TR24 K1-SC-ASC	(1) TR24 OTDR Test Receiver (1) Soft-sided carry case

Fiber Optic Loss / Return Loss Test Sets

Noyes Fiber Systems Fiber Optic Loss /Return Loss Test Sets are designed to measure loss and return loss on high speed digital or analog fiber optic spans in Telecom, CATV, and IXC networks. Models are available to perform loss and return loss measurements on single-mode fibers at 1310, 1550 and 1625 nm. Supplied with Windows® compatible data analysis software (WinTest), test results can be transferred from the internal memory, via the RS-232 port, to a PC for full fiber documentation.



Turbotest 500B - Broadband Loss / Return Loss

The new T500B Series is the continuation of the popular Turbotest 500 product line. The T500B Series offers the latest technology in a single fiber bi-directional loss and return loss testing. Five compact models are available, including the three wavelength (1310/1550/1625) T506B and (1310/1550/1490) T506B-FTTH. An optional dedicated digital talk option is available for full time/full duplex communication between test operators while testing other fibers in a bundle. T500B units are sold individually but normally used in pairs.

Specifications

MODEL	T503B	T504B	T505B	T506B	T506B-FTTH
Center Wavelengths (nm)	1310, 1550	1310, 1550	1550, 1625	1310, 1550, 1625	1310, 1550, 1490
Output Power (dBm)	-5	-5	-5	-5	-5
Emitter Type	Laser	Laser	Laser	Laser	Laser
Safety Class	FDA 21 CFR 1040.10 and 1040.11, and IEC 60825-1 amended Q2, 2001				
Detector Type	InGaAs	InGaAs	InGaAs	InGaAs	InGaAs
Insertion Loss Measurement Range (dB)	45	45	45	45	45
Optical Power Measurement Range (dBm)	+6 to -70	+26 to -50	+26 to -50	+26 to -50	+26 to -50
Optical Power Measurement Units	dB, dBm, μW				
ORL Dynamic Range (dB)	65				
Available Connector Types	ASC or AFC				
Power	Lithium-Ion or AC Adapter				
Li-Ion battery pack charging temp.	-10 to +45° C				

Notes

Add -T for 40 dB 1310 nm Talk Set Option. Add -Y for 40 dB 1550 nm Talk Set Option. (Example: T506B-Y is 1310/1550/1625 Turbo with 1550nm Talk Set Option)
T500B instruments are sold individually but normally used in pairs



OLTS 5 Optical Loss Test Set

The OLTS 5 Optical Loss Test Set series offers end-to-end single-mode testing at either 1310/1550 nm or 1550/1625 nm. The OLTS 5 may be operated in automatic or manual test modes. In its "two-unit" automatic test mode, a pair of OLTS 5 test sets may be used to measure the end-to-end, bi-directional insertion loss of a pair of single-mode fibers at 1310/1550 nm or 1550/1625 nm. Tests are started and controlled by the user from the OLTS 5 configured as the Main unit. Test progress messages and results are displayed on the Remote unit. Full test results can be reviewed and saved in the Main unit. Thresholds may be set to provide Pass/Fail results. In its "single-unit" automatic test mode the OLTS 5 can measure bi-directional, dual-wavelength insertion loss of patch cords, or fiber optic cables while they are still on the reel. In the manual operating mode individual OLTS 5 test sets can operate either as an optical power meter (OPM) or dual-wavelength laser source. The OLTS 5 can store dual-wavelength, bi-directional insertion loss results for up to 1,000 fibers. Test results can be organized in up to 20 user-named files. Results are transferred to a PC via a serial link. Windows® software is provided to view, edit, and print test results. OLTS 5 units are sold individually but normally used in pairs.

Features

- Rugged, handheld, designed for field use
- Integrated dual-wavelength laser source and optical power meter
- Automatic bi-directional, dual-wavelength insertion loss measurement
- Optical power meter and light source manual test modes
- Up to 1000 test records (40 files) storage and download
- Free Windows® compatible software to view, print, and archive test records
- (AA) alkaline. Optional internally recharged NiMH battery pack or AC adapter
- Cost-effective, easy to use

Ordering Information

MODEL	INCLUDES
All OLTS 5 models	(1) OLTS 5, (2) AA alkaline batteries, protective rubber boot, PC software, adapter cap of the same connector type as the transmit port, user's guide, and carry case.

When ordering, connector type after the model number, for example OLTS 5-3 SC.

Specifications

MODEL	OLTS 5-3	OLTS 5-5	OLTS 5-6
TRANSMIT PORT (LASER SOURCE) SPECIFICATIONS			
Center wavelengths	1310/1550 ± 20 nm	1550/1625 ± 20 nm	1310/1550 ± 20 nm
Emitter type	Laser, Class 1 (FDA and IEC)*		
Output power into 9/125 SM fiber	-5 dBm (nominal)		
Stability	± 0.1 dB, up to 8 hours		
Insertion loss and power measurement resolution	0.01 dB		
Available connector types	SC or FC		
RECEIVE PORT (OPTICAL POWER MEASUREMENT) SPECIFICATIONS			
Detector type	InGaAs	Filtered InGaAs	
Calibrated wavelengths	850, 980, 1300, 1310, 1480, 1550, 1625 nm		
OPM (manual) mode optical power display range	+ 10 to - 70 dBm		+ 16 to - 60 dBm
OLTS (automatic) mode insertion loss measurement range	45 dB		39 dB
Accuracy at - 10 dBm, 25°C	± 0.25 dB		
Connector types	Thread-on adapter cap mount		
GENERAL SPECIFICATIONS			
Display	128 X 64 dot matrix liquid crystal display		
Dimensions (H x W x D)	18.5 X 11.1 X 4.6cm (7.3 X 4.4 X 1.8in)		
Weight	0.55 kg (1.2 lbs.)		
Operating temperature and humidity	0 to +50°C, 90% RH (non-condensing)		
Storage temperature and humidity	-20 to +60°C, 95% RH		
Power	2 AA Alkaline (2-cell NiMH or AC adapter optional)		
Battery life (typical)	(2) AA - 17 hours; NiMH battery pack - 11 hours		

* FDA 21 CFR 1040.10 and 1040.11, and IEC 60825-1 amended 02, 2001

Note: All specifications at room temperature (25°C) unless indicated otherwise.

Certification Test Sets

Testing fiber cable with the Turbotest 400 Series saves time and money. Once the testing standard has been selected, it's only moments after pressing the AutoTest key before PASS/FAIL results are displayed. AutoTests are based on length, propagation delay, dual-wavelength loss results and user-supplied data such as the number of splices and connections. The Turbotest 400 can also operate like a traditional optical power meter to measure optical power at 850, 1300, 1310, and 1550 nm. Using the supplied Windows® software, test results can be downloaded to your PC to document your network or to produce professional certification reports for your customer. The Turbotest 400 Series stores up to 1000 fiber test results in user defined files. To speed the testing process, both models can automatically increment fiber numbers. AutoTest certification standards include TIA 568-A, ISO 11801, EN 50173, 10 Base-FL, 100 Base-FX, 1000 Base-SX, 1000 Base-LX, and FDDI. Additional certification standards can be programmed by the user.



Turbotest 400 - Premises Certification

Turbotest 400 Fiber Certification Test Sets are designed to quickly test either multimode or single-mode fiber links, and generate certification reports based on the latest fiber standards. Two versions are available, the Turbotest 410 which operates at 850/1300 nm for multimode applications, and the Turbotest 420 which operates at 1310/1550 nm for single-mode applications.

Specifications

MODEL	T410	T420
Center Wavelengths	850/1300	1310/1550
Emitter Type	LED	Laser
Safety Class	IEC 1	FDA 1, IEC 1
Detector Type	Ge	Ge
Link Certification Range – Loss (dB) – Length (km)	11 5	11 20
Power Meter Measurement Range (dBm)	0 to -40	0 to -40
Available Connector Types	ST, SC	ST, SC, FC
Power	4 AA Alkaline or AC	4 AA Alkaline or AC

Accessories

MODEL	DESCRIPTION
4050-00-0112	AC Adapter, 100-240 VAC / 12 VDC
6000-00-0003	Serial Cable, 9-pin M to 9-pin F

Optical Power Meters

Optical power meters may be used to measure optical power in premises, telco, or broadband fiber optic networks. When used with an LED or laser light source, an OPM can also measure the attenuation (insertion loss) of multimode or single-mode cables.



OPM 1 - Measures Optical Power in dBm

With only two controls – Power and Wavelength – the OPM1 is our simplest to use optical power meter. Optical power in dBm and the calibration wavelength setting are displayed on an easy to read LCD display.



OPM 4 - Adds Wave ID and Set Reference

The OPM4 offers automatic wavelength identification and switching when used with Wave ID light sources. The OPM4 stores optical references for each calibrated wavelength. An easy to read Dual Wavelength LCD display with Backlight shows measured power [dBm or μ W] or insertion loss [dB], calibrated wavelengths, tone signal [Hz], wavelength ID, and the battery charge status.



OPM 5 - Adds Wave ID and Data Storage

The OPM5 offers automatic wavelength identification and switching when used with Wave ID light sources. The OPM5 stores optical references for each calibrated wavelength. An easy to read Dual Wavelength LCD display with Backlight shows measured power [dBm or μ W] or insertion loss [dB], calibrated wavelengths, tone signal [Hz], wavelength ID, and the battery charge status. Up to 500 records per wavelength of power or insertion loss measurements may be stored in internal non-volatile memory. Using the supplied Windows® compatible software and USB connection, test records may be transferred to a PC for storage, display, printing, and analysis.

Optical Power Meters

Specifications

MODEL	OPM1-2C	OPM1-3C	OPM4-1D	OPM4-2D	OPM4-3D	OPM4-4D	OPM5-2D	OPM5-3D	OPM5-4D
Calibrated wavelengths (nm)	850, 1300, 1310, 1550	850, 1300, 1310, 1550	660, 780, 850	850, 1300, 1310, 1550	850, 1300, 1310, 1550, 1625	850, 980, 1310, 1490, 1550, 1625	850, 1300, 1310, 1550	850, 1300, 1310, 1550, 1625	850, 980, 1310, 1490, 1550, 1625
Detector type	Germanium	InGaAs	Silicon	Germanium	InGaAs	Filtered InGaAs	Germanium	InGaAs	Filtered InGaAs
Measurement range (dBm)	+6 to -60	+6 to -70	+6 to -70	+6 to -60	+6 to -70	+26 to -50	+6 to -60	+6 to -70	+26 to -50
Measurement units	dBm	dBm	dB, dBm, μ W	dB, dBm, μ W	dB, dBm, μ W	dB, dBm, μ W	dB, dBm, μ W	dB, dBm, μ W	dB, dBm, μ W
Power	9 vdt	9 vdt	2 x AA batteries, optional NiMH	2 x AA batteries, optional NiMH	2 x AA batteries, optional NiMH	2 x AA batteries, optional NiMH	2 x AA batteries, optional NiMH or AC	2 x AA batteries, optional NiMH or AC	2 x AA batteries, optional NiMH or AC
Wavelength ID	—	—	yes	yes	yes	yes	yes	yes	yes
Set reference	—	—	yes	yes	yes	yes	yes	yes	yes
Tone Detect*	—	—	yes	yes	yes	yes	yes	yes	yes
PC software & storage	—	—	—	—	—	—	yes	yes	yes

* 270 Hz, 330 Hz, 1 kHz, and 2 kHz Tone detection.

Light Sources



OLS 1 LED Light Source

The OLS 1 series of LED light sources are inexpensive, practical instruments designed for performing insertion loss measurements on fiber optic links when used with an optical power meter. The LED output is stabilized to ensure accurate test results per current TIA/EIA requirements. The OLS 1 is easy to operate with only a power/wavelength select switch. Weighing only 0.65 lb, the OLS 1 is compact and convenient for field use.



OLS 1-Dual LED Light Source with Wave ID

The OLS 1-Dual light source features 850 nm and 1300 nm LED output from a single output port and is easy to operate with only a power button and a wavelength select button. This light source offers 3 modes of operation: Dual wavelengths sending ID, single wavelength sending ID, and CW. The output port is equipped with a removable SC (FC & ST available) adapter to allow the output connector to be inspected and cleaned. The LED output is stabilized to ensure accurate test results per current TIA/EIA requirements.



OLS 2 Laser Light Source

The OLS 2 laser source is a cost-effective, rugged, handheld instrument designed for performing insertion loss measurements on single-mode fiber optic links when used with an optical power meter. When paired with an optical fiber identifier, the OLS 2 may be used for fiber identification. The LASER output is stabilized to ensure accurate test results per current TIA/EIA requirements. Three versions of the OLS 2 are available for measurements at 1310 nm, 1550 nm, 1625 nm. These compact units operate in either continuous wave (CW) mode or 2 kHz modulated mode.



OLS 2 - Dual Laser Light Source with Wave ID

The OLS 2-Dual features 1310 nm and 1550 nm LASER output from a single output port and is easy to operate. The LASER output is stabilized to ensure accurate test results per current TIA/EIA requirements. This light source offers 4 modes of operation: Dual wavelengths sending ID, single wavelength sending ID, CW, and modulated tone. When paired with an optical fiber identifier, the OLS 2-Dual may be used for fiber identification. The output port is equipped with UCI based removable adapters to allow the output connector to be inspected and cleaned.

Light Sources (continued)



OLS 4 Integrated LED & Laser Light Source with Wave ID

The OLS 4 is an integrated, two-port LED and LASER light source. The LED and LASER outputs are stabilized to ensure accurate test results per current TIA/EIA requirements. The OLS 4 features 850 nm and 1300 nm LED output from a multimode output port and 1310 nm and 1550 nm LASER output from a single-mode output port. This light source offers 4 modes of operation: Dual wavelengths sending ID, single wavelength sending ID, CW and modulated Tone. [Active Output], [Tone], [Battery], and [External Power] indicators identify the currently enabled operating mode, battery charge status, and external power presence. Both output ports are equipped with UCI based removable adapters to allow the output connectors to be inspected and cleaned.



OLS7 Triple Wavelength Laser Sources with Wave ID

The OLS7 laser source features 1310/1550/1625 nm triple wavelength LASER output from a single port and is easy to operate. Each wavelength may be transmitted individually at CW or with tone modulation at frequencies of 270Hz, 330Hz, 1kHz and 2kHz. Also, each wavelength may be transmitted with Wave ID. The OLS7-FTTH output port is equipped with UCI based removable adapters to allow the output connectors to be inspected and cleaned.

OLS7- FTTH Triple Wavelength Laser Source with Wave ID

The OLS7-FTTH laser source is designed specifically for today's FTTH network architectures. It features a triple wavelength LASER output from a single port: 1310nm output for testing in the upstream direction and 1490 or 1550nm, for testing in the downstream direction. The OLS7-FTTH output port is equipped with UCI based removable adapters to allow the output connectors to be inspected and cleaned.

Light Sources (continued)

Specifications

PARAMETER	CLS 1-1C	CLS 1-2C	CLS 2-1300	CLS 2-1550
Output wavelengths (nm)	650 - red, 850 + 35/-40	850 + 35/-40, 1300 + 50/-10	1310 ±20	1550 ±20
Output ports	2	2	1	1
Emitter type	LED	LED	Laser	Laser
Safety class	IEC 1	IEC 1	FDA 1, IEC 1	FDA 1, IEC 1
Output power (nominal, dBm)	-10 @ 660 nm >-20 @ 850 nm	-20	-5 *	-5 *
Stability	± 0.1 dB over 8 hours	± 0.1 dB over 8 hours	± 0.1 dB over 1 hour ± 0.15 dB over 8 hours	± 0.1 dB over 1 hour ± 0.15 dB over 8 hours
Available connector types	ST	ST	FC, SC, ST	FC, SC, ST
Power	9 volt or AC	9 volt or AC	9 volt or AC	9 volt or AC

* Adjustable ± 1dB

PARAMETER	CLS 1-DUAL	CLS 2-DUAL	CLS 4	CLS7-FTTH	CLS7
Output wavelengths (nm)	850 ±30, 1300 +50/-10	1310 ±20 1550 ±20	850 ± 30 nm, 1300 -10/+50 nm (MMport) 1310 ± 20 nm,, 1550 ± 20 nm (SMport)	1310 ±20, 1490 ±20, 1550 ±20	1310 ±20, 1550 ±20, 1625 ±20
Output ports	1	1	2	1	1
Emitter type	LED	Laser	LED & Laser	Laser, Class I (FDA 21 CFR 1040.10 and 1040.11)	Laser, Class I (FDA 21 CFR 1040.10 and 1040.11)
Safety class	IEC 1	FDA 1, IEC 1	FDA 1, IEC 1	FDA 21 CFR 1040.10 and 1040.11	FDA 21 CFR 1040.10 and 1040.11
Output power (dBm)	>-20*	0**	>-20* @ 850 nm; >-20* @ 1300 nm 0 @ 1310, 0 @ 1550 nm	-5 (typical) into 9/125 fiber	-5 (typical) into 9/125 fiber
Stability	± 0.1 dB over 8 hours	± 0.05 dB over 1 hour ± 0.15 dB over 8 hours	± 0.1 dB over 1 hour (MMport) ± 0.05 dB over 1 hour; ± 0.15 dB over 8 hours (SMport)	± 0.05 dB over 1 hr: (after 15 min warm-up, after 30 sec typical) ± 0.1 dB over 8 hrs (after 15 min warm-up, after 30 sec typical)	± 0.05 dB over 1 hr: (after 15 min warm-up, after 30 sec typical) ± 0.1 dB over 8 hrs (after 15 min warm-up, after 30 sec typical)
Wave ID transmit	yes	yes	yes	yes	yes
Available connector types	FC, SC, ST	FC, SC, ST, LC	FC, SC, ST, LC	SC standard, FC & ST available, LC optional	SC standard, FC & ST available, LC optional
Power	2 x AA batteries, optional NiMH or AC	2 x AA batteries, optional NiMH or AC	2 x AA batteries, optional NiMH or AC	2 x AA batteries, optional NiMH or AC	2 x AA batteries, optional NiMH or AC

* Output power will be approximately 3 dB less if a 50 µm mandrel-wrapped jumper is used instead of a 62.5 µm mandrel-wrapped jumper.

** Adjustable 2dB

Fiber Optic Loss Test Kits

To accommodate your fiber optic loss testing needs, Noyes offers a variety of multimode (MLP) test kits, single-mode (SLP) test kits, single-mode/multimode (SMLP) and Contractor Series (CK) test kits. These kits are ideal solutions for testing and certifying a range of networks such as LANs, WANs, IXC, CATV, and Telecom. Kits come complete with an adapter cap, software, download cable and instructions.



CKM 2 - Contractor Series Multimode Test Kit with Set Reference

Combining the CSM2 optical power meter and CSS-MM Dual LED light source, the CKM 2 is a cost-effective test kit designed for performing insertion loss measurements on multimode fiber optic links.



CKSM 2 - Contractor Series Multimode & Single-mode Test Kit with Set Reference

Combining the CSM2 optical power meter, CSS-MM Dual LED light source, and CSS-SM Dual LASER source, the CKSM 2 is a cost-effective test kit designed for performing insertion loss measurements on multimode as well as single-mode fiber optic links.

