

OFI-2000 Multifunction Loss Test Set



Key Features

- FOX functionality allows for automatic continuity check, bi-directional IL, ORL, and length measurements with a single key press
- FTTx ready by integrating dedicated wavelengths (1310/1490/1550 nm) for PON testing as well as an optimized test sequence for increased field productivity
- Compact and rugged design makes it an ideal field tool
- Large front panel provides easy access for the connection/disconnection of the fiber
- Large, high-visibility color display allows for use in any lighting conditions, making it suitable for both outside plant and central office use
- Test results are provided in a single table, providing a very comprehensive data management system
- Pass/fail indicators allow for rapid fault detection and identification

Fiber network deployment, service provisioning, and troubleshooting

In today's telecommunications market, test solutions must be cost effective, increase productivity, and reduce the complexity of field testing. JDSU's OFI-2000 Multifunction Loss Test Set offers a highly versatile handheld test instrument, which has been specifically developed in response to these industry demands.

Configurable at the time of order, the OFI-2000 is capable of fully characterizing the suitability of the optical fiber for transport, metro, or access networks, including FTTx and Passive Optical Network (PON) systems.

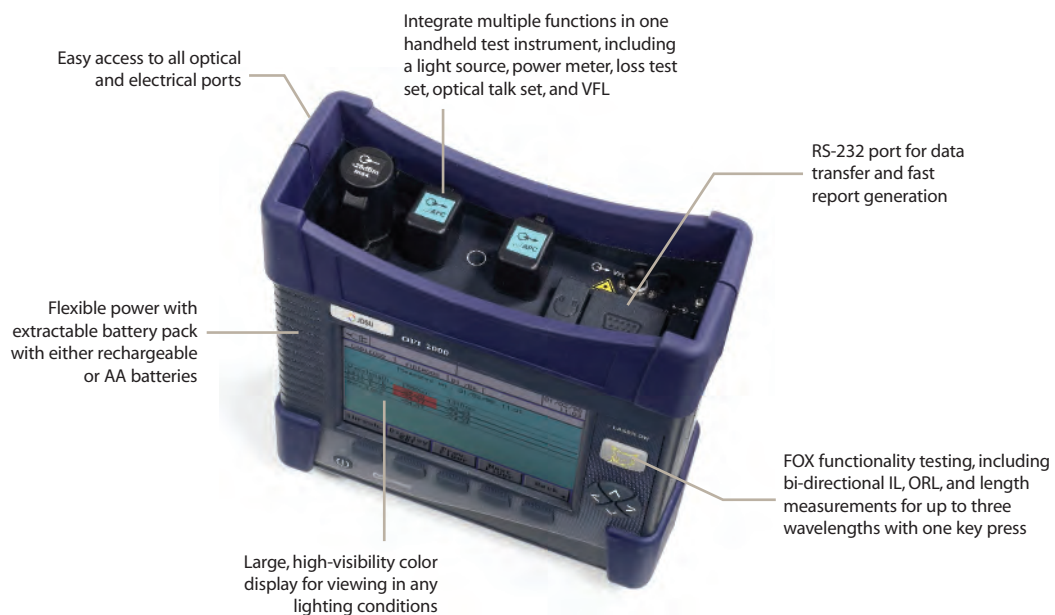
By combining a large high-visibility color display, intuitive one-button Fiber Optics eXpert (FOX) functionality, and simple pass/fail indicators, the OFI-2000 enhances productivity and reduces the burden of training technicians. Cables with high fiber counts can be easily characterized using the OFI-2000's unique color-coding and large memory storage capabilities. In addition, professional proof-of-performance reports can be quickly generated using JDSU's FiberBudget and FiberCable software solutions.

Improve productivity and efficiency in the field

The OFI-2000 includes several features that improve productivity and reduce test times on cables with high fiber counts. Using the test instrument's FOX functionality, technicians are guided through the test setup process. In addition, one single key press automatically tests, displays, and records measurements on both the near-end and far-end units.

- Ensure accurate and consistent testing with the OFI-2000's durable shock- and weather-resistant design
- Extend testing periods using batteries in the field (up to 14 hours)
- Dramatically reduce test times by evaluating fiber continuity, insertion loss (IL), optical return loss (ORL), and length measurements and displaying all results on both OFI-2000 units within 15 seconds per fiber
- Minimize the amount of time required for fiber connection and disconnection using the OFI-2000's easy front panel access
- Store complete test results in both OFI-2000 units for an on-site reporting capability in master-master systems
- The OFI-2000 automatically stores results at the end of each test and replicates the results between the near-end and far-end units to ensure the integrity of the test data
- Minimize handling errors using the OFI-2000's pass/fail indicators

Portable, rugged, weather resistant and battery operated, the OFI-2000 is ideal for field testing during the installation and deployment of both fiber and PON networks.



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Test the fiber

Using the OFI-2000's easy-to-use graphical user interface (GUI), the test instrument is simple to set up for referencing and obtaining ORL measurements. The technician is easily guided through the necessary steps. Each unit integrates a precise standalone power meter to enhance referencing and improve optical return loss budget measurement accuracy.

- Provides an automated bi-directional loss test set for fiber insertion loss, return loss, length, and continuity checking as well as an optional VFL and optical talk set
- Tests at 1310/1550/1625 nm wavelengths for telecommunications applications
- Tests at 1310/1490/1550 nm wavelengths for FTTx/PON applications
- Provides accurate and reliable ORL measurements even on very short spans of fiber, FTTx for example

Referencing with the easy-to-use GUI

Perform multiple acquisitions with the FOX functionality button

View results in one table with pass/fail indicators

Wavelength	1310nm	1550nm	1625nm
Loss 0->E			
Loss E->0			
Avr. Loss			
ORL 0			
ORL E			
Worst ORL			

Wavelength	1550nm	1310nm
Loss 0->E	-24.38	-24.24
Loss E->0	-24.37	-24.24
Avr. Loss	-24.37	-24.24

Includes a color-coding capability for ease-of-use

Ready to test the next fiber!

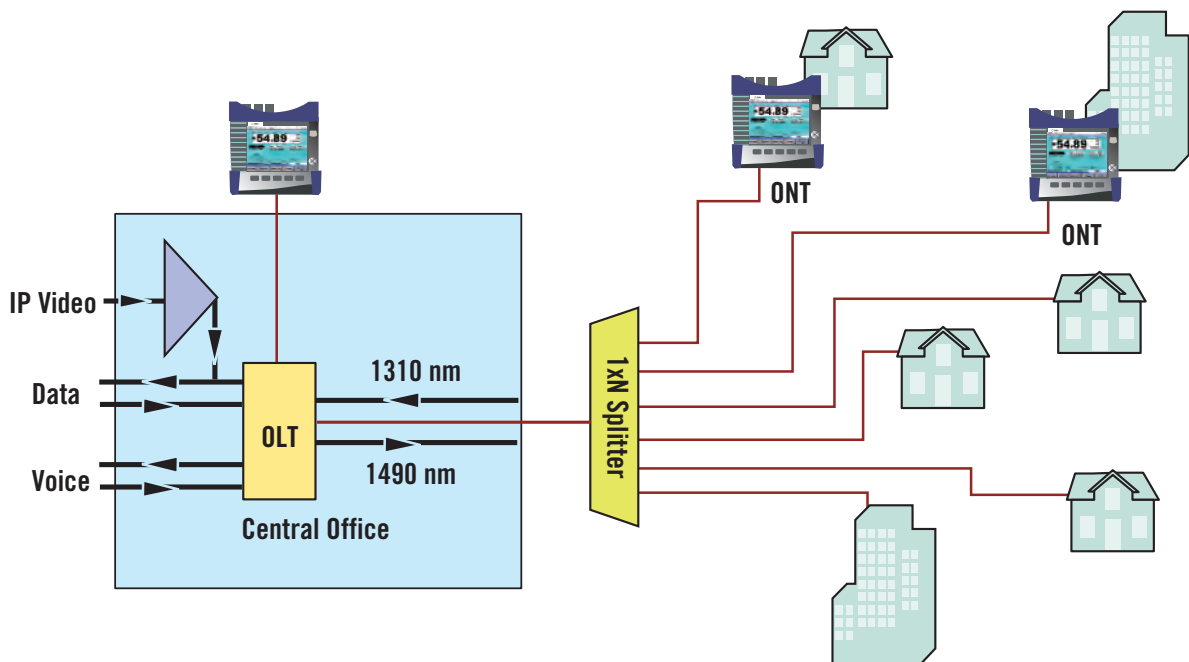
Bi-directional FTTx testing using one technician

- In compliance with ITU-T G.983.3, the OFI-2000 provides a three wavelength version at 1310 nm, 1490 nm, and 1550 nm, expanding its test capabilities to FTTx/PON
- The master-master operation of the OFI-2000 enables technicians to leave one unit at the central office (CO) in standby mode and perform the testing from the ONT using the other unit. Alternatively, multiple OFI test instruments (OFI-2000s or OFI modules for the MTS/T-BERD platforms) can be used.
- Document both ends of the link with one piece of test equipment

Communicate along the fiber

Near-end and far-end technicians can communicate with each other using the built-in short messaging system (SMS). For more flexible dialog during testing using a dedicated communications fiber, the OFI-2000 is available with a 45 dB optical talk set option, providing a dedicated port and headset/microphone for both units.

- 45 dB optical talk set offers a constant communication capability with a dedicated port and headset/microphone
- Compatible with all optical talk sets in JDSU's product portfolio, including the MTS/T-BERD platforms and the OTS-55



FTTx/PON characterization using one technician at the customer premises

Comprehensive list of cable results

Using JDSU's unique cable manager solution, the amount of time and costs associated with analyzing your results can be significantly reduced. Results can be provided by job, cable, or fiber according to the pass/fail thresholds that have been preset by the technician.

- Large memory storage capability and pass/fail indicators improve productivity (up to 1000 fibers)
- The user-definable color-coding management system follows TIA/EIA wiring standards and automatically decodes the fiber number to help the technician identify the different fibers
- The results display allows for the rapid identification of missing records and/or "fail" values

Tested fibers : 072/072						
Fiber Id.	Color	Length Km	Average Loss		Worst ORL	
			1310nm	1550nm	1310nm	1550nm
FIBER001	Bu-Aq	139.38	+122.39	-065.57	92.37	75.47
FIBER002	Or-Rd	139.38	+122.39	-065.57	92.37	75.47
FIBER003	Or-Vl	139.38	+122.39	-065.57	92.37	75.47
FIBER004	Br-Ye	139.38	+122.39	-065.57	92.37	75.47
FIBER005	Sl-Bk	139.38	+122.39	-065.57	92.37	75.47
FIBER006	Wn-Rd	139.38	+122.39	-065.57	92.37	75.47
FIBER007	Rd-Wh	139.38	+122.39	-065.57	92.37	75.47
FIBER008	Bk-Sl	139.38	+122.39	-065.57	92.37	75.47
FIBER009	Ye-Sl	139.38	+122.39	-065.57	92.37	75.47

- All relevant fiber information is displayed on one large 5.7" screen
- Fibers are identified by number and color
- Out-of-range length, loss, and ORL measurements are identified

Fiber results review

Insertion loss table

test

Origin location: Job Core location: Job

Fiber Id	Color	Loss 1310 nm			Loss 1550 nm		
		ORL	Attenuation	Attenuation	ORL	Attenuation	Attenuation
FIBER01 Bl-Br	-2.68	-2.60	-2.00	-1.22	-1.76	-1.88	
FIBER02 Bl-Br	-2.68	-2.60	-2.00	-1.22	-1.76	-1.88	
FIBER03 Bl-Br	-2.68	-2.60	-2.00	-1.22	-1.76	-1.88	
FIBER04 Bl-Br	-2.68	-2.60	-2.00	-1.22	-1.76	-1.88	
FIBER05 Bl-Br	-2.67	-2.62	-2.04	-1.88	-1.77	-1.73	
FIBER06 Bl-Br	-2.67	-2.64	-2.05	-1.88	-1.76	-1.73	
FIBER07 Bl-Br	-2.67	-2.60	-2.05	-1.22	-1.76	-1.88	
FIBER08 Bl-Br	-2.68	-2.62	-2.05	-1.23	-1.76	-1.87	
FIBER09 Bl-Br	-2.68	-2.60	-2.07	-1.23	-1.77	-1.73	
FIBER10 Bl-Br	-2.68	-2.60	-2.05	-1.23	-1.76	-1.88	
FIBER11 Bl-Br	-2.68	-2.60	-2.05	-1.23	-1.77	-1.88	
FIBER12 Bl-Br	-2.68	-2.60	-2.05	-1.23	-1.77	-1.88	
FIBER13 Cr-Wr	-2.68	-2.60	-2.07	-1.23	-1.76	-1.73	
FIBER14 Cr-Wr	-2.68	-2.60	-2.04	-1.23	-1.76	-1.88	
FIBER15 Cr-Wr	-2.68	-2.68	-2.07	-1.23	-1.76	-1.88	
FIBER16 Cr-Wr	-2.68	-2.60	-2.05	-1.23	-1.76	-1.88	
FIBER17 Cr-Wr	-2.68	-2.64	-2.05	-1.23	-1.76	-1.88	
FIBER18 Cr-Wr	-2.68	-2.64	-2.05	-1.23	-1.77	-1.73	
FIBER19 Cr-Wr	-2.68	-2.60	-2.04	-1.23	-1.76	-1.73	
FIBER20 Cr-Wr	-2.68	-2.68	-2.05	-1.23	-1.76	-1.88	
FIBER21 Cr-Wr	-2.68	-2.60	-2.05	-1.24	-1.76	-1.88	
FIBER22 Cr-Wr	-2.68	-2.64	-2.05	-1.23	-1.76	-1.88	
FIBER23 Cr-Wr	-2.68	-2.60	-2.00	-1.23	-1.76	-1.88	
FIBER24 Cr-Wr	-2.68	-2.60	-2.05	-1.24	-1.76	-1.88	
FIBER25 Cr-Wr	-2.68	-2.60	-2.07	-1.24	-1.76	-1.88	
FIBER26 Cr-Wr	-2.67	-2.67	-2.07	-1.24	-1.76	-1.88	
FIBER27 Cr-Wr	-2.67	-2.67	-2.07	-1.24	-1.76	-1.88	
FIBER28 Cr-Wr	-2.68	-2.60	-2.07	-1.24	-1.77	-1.88	
FIBER29 Cr-Wr	-2.68	-2.60	-2.07	-1.24	-1.76	-1.88	
FIBER30 Cr-Wr	-2.68	-2.68	-2.05	-1.24	-1.76	-1.88	
FIBER31 Cr-Wr	-2.68	-2.60	-2.07	-1.24	-1.76	-1.88	
FIBER32 Cr-Wr	-2.68	-2.68	-2.07	-1.24	-1.76	-1.73	
FIBER33 Cr-Wr	-2.68	-2.60	-2.07	-1.24	-1.76	-1.88	

Example of test report

Generate the test report

Transfer the data and generate comprehensive reports using JDSU's FiberBudget software. This software is complimentary and can be downloaded from jdsu.com.

- Generate proof-of-performance reports with a high degree of customization capabilities
- Dedicated tables are provided for each test result (length, loss, ORL)
- Out-of-range value summaries are provided with analysis of macro-bends
- Compare results between the different wavelengths to identify bends and constraints



MTS/T-BERD 8000 platform with OTDR and OFI modules

Enhanced testing solution

The OFI-2000 not only functions as a standalone test solution, but it can also be combined with JDSU's MTS/T-BERD platforms for the complete characterization of the fiber network using additional test functions, such as OTDR, CD, and PMD. The OFI-2000 is fully compatible with the OFI module of the optical test platform allowing for fiber continuity checks and bi-directional length, loss, and return loss measurements as well as enabling communication through the optical talk set or using the SMS.

Simplify fiber testing!

A wide range of accessories are available that will provide technicians with everything they need to take advantage of the OFI-2000's complete testing capabilities.



OFI-2000's accessories

**OFI-2000 Technical Specifications
(Typical 25°C) Base unit**

Display	1/4 VGA active b/w display (5.7 in)
Power supply, removable, 3-way	Dry batteries, NiMH rechargeable battery, AC/DC
Operating time with dry batteries (loss test set mode)	>8 hours
Operating time with NiMH (loss test set mode)	>13 hours
CE conformance	Yes
Operation temperature range	-10 to +50°C
Storage temperature range	-20 to +70°C
Weight with dry batteries and all options	4 lb (1.8 kg)
Dimensions (w x h x d)	8 x 8 x 3 inches (20 x 20 x 8 cm)
Data transfer direct via RS-232	Yes
Store function	Yes

Bi-directional test set specifications

These specifications apply to the OFI-2000 Series.
To ensure optimal use (bi-directional measurement and communication), two OFI-2000 units are required.

**Source function
(also valid for source mode)**

Laser type	Class 1 laser
Wavelength at 25°C	1310 ±30 nm, 1490 ±10 nm, 1550 ±30 nm, 1625 ±10 nm
Spectral bandwidth	5 nm maximum
Output level into 9/125 µm fiber (CW mode)	-3.5 dBm
Modulated output average level	3 dB less
Level stability	
Short term 15 min (T = ±0.3 K)	±0.02 dB
Long term 8 hours (T = ±0.3 K)	±0.2 dB
Modulation frequencies	Continuous wave, 270 Hz, 330 Hz, 1 kHz, 2 kHz
TWINtest and auto-λ detection	All wavelengths activated one after the other

**Power meter function
(internal pigtailed photo detector)**

Wavelength range	1200 to 1650 nm
Auto-λ detection (including TWINtest)	850/1310/1550/ 1625 nm with JDSU laser sources
Dynamic range of the power meter	0 to -80 dBm
Detector type	InGaAs
Display resolution	0.01 dB

Loss test set function

Dynamic range of loss	60 dB
Accuracy	Loop back: ±0.25 dB, side-by-side: ±0.15 dB
Result resolution	0.01 dB

**Optical return loss function
(also valid for manual ORL)**

ORL measurement display range (limited to front-end connector, APC recommended)	Up to 65 dB
Accuracy	±0.5 dB

Length function

Distance accuracy L < 3 km: ±50 m, 3 km < L < 200 km: ±1.5%

Standalone power meter

Wavelength range (adjustable per 1 nm)	800 to 1650 nm
Selectable wavelengths	850/1300/1310/1480/1510/ 1550/1625 nm and one user-defined

Auto-λ detection (including TWINtest)	850/1310/1490/1550/1625 nm
Modulation detection	270 Hz, 330 Hz, 1 kHz, 2 kHz
Display resolution	0.01 dB

	Standard power	High power
Dynamic range	+10 to -70 dBm	+26 to -50 dBm
Accuracy	±0.2 dB (+7 to -60 dBm)	±0.25 dB (+23 to -50 dBm)
Detector type	InGaAs, 2 mm	Filtered InGaAs, 2 mm

Optical talk set option

Full duplex on one fiber	
Dynamic range	Up to 45 dB

Visual fault locator option

Wavelength	635 nm
Output power into 9/125 µm fiber	1 mW maximum
Optical interface	Universal push/pull for all common 2.5-mm connectors
Output modes	CW, 1 Hz

Ordering information

The standard OFI-2000 Multifunction Loss Test Set includes a black-and-white LCD screen, RS-232 interface and cable, neck strap, AC/DC adapter, soft case, one battery pack with six dry batteries, one rechargeable battery, user manual, lens tissue (30 pcs), and connector cleaning sticks (5 pcs). The basic functions include a bi-directional loss test set with standalone power meter and delay/length measurements.

OFI-20
X
Laser type

0 : 1310/1550 nm

3 : 1310/1550/1625 nm

4 : 1310/1490/1555 nm

X
Standalone power meter type

1 : Standard power

2 : High power

Example

OFI-2031 is a 1310/1550/1625 nm standard power loss test set

Base unit options

EOFICOL	High visibility color display
EOFIOTS	Optical talk set (45 dB) with headset
EOFIVFLUPP	VFL option with UPP connector
EOFIORL	ORL with mandrel (available only with bi-directional loss test set)
EAUPP25	UPP adapter for DIN, FC, SC, ST (D = 2.5 mm)
EAUPP125	UPP adapter for LC, MU (D = 1.25 mm)

Accessories for the OFI-2000 family

EOFIRB	Rechargeable battery (can be charged with OFI or AC/DC)
EOFIACDC	AC/DC adapter
EOFICASE	Additional OFI soft case
EOFICL	Cigarette lighter power adapter

Optical connectors for the loss test set and talk set (connectors must be of the same type)

One connector must be specified when ordering an OFI-2000 unit

Field-replaceable connectors: EUNIPCFC, EUNIPCSC, EUNIPCST, EUNIPCDIN, EUNIPCLC, EUNIAPCFC, EUNIAPCSC, EUNIAPCST, EUNIAPCDIN, EUNIAPCLC

Optical adapters for the standalone optical power meter

One optical adapter of the same type as the loss test set connector is provided as standard

Other adapters are also available: A/SMA, FC/PC, Diamond, Biconic, DIN, VFO, ST, SC, EC, E2000, UPP 2.5 mm, and UPP 1.25 mm (2014/00.XX type)

For more information regarding test adapters, cables, and fiber optic couplers, refer to the separate datasheet: Fiber Optic Test Adapters and Cables.

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Test & Measurement Regional Sales

NORTH AMERICA TOLL FREE: 1 866 228 3762 FAX: +1 301 353 9216	LATIN AMERICA TEL: +55 11 5503 3800 FAX: +55 11 5505 1598	ASIA PACIFIC TEL: +852 2892 0990 FAX: +852 2892 0770	EMEA TEL: +49 7121 86 2222 FAX: +49 7121 86 1222	WEBSITE: www.jdsu.com
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