



*Enabling Australia's Field Technicians to build, troubleshoot and maintain better communications networks.*



This reference material is provided by TMG Test Equipment, VIAVI's **only** Master Distributor for Contractors in Australia



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Finance Available



Short to Medium Project-Based Rental Solutions



Dedicated Technical & After-Sales Support



In-house Diagnostics, Repair & NATA Calibration Laboratory



**FREECALL 1800 680 680**

## MTS/T-BERD Platforms

### OFI Multifunction Loss Test Module



#### Key Features

- One-button automated testing, including continuity check, bi-directional insertion loss and return loss, length measurement, and file storage in a fraction of seconds
- Intuitive and user friendly interface for error-free referencing and measuring
- Fiber characterization functionality determines infrastructure suitability for transport, metro, access, and FTTx/PON networks
- All-in one cable and/or fiber results with Pass/Fail indication and color coding information

2007

FROST &amp; SULLIVAN

Global Communications  
Test & Measurement  
Company of the Year Award

#### Highlights

- ITU-T G.983.3 compliance
- Three-wavelength version (1310, 1490, and 1550nm) supports FTTx/PON testing
- Master-master operation; one unit can be left in standby while other OFI unit (OFI module or OFI-2000) performs the test.
- A single instrument at each end of the link documents performance

#### Versatile optical test module

Test solutions need to be cost effective, increase productivity, and reduce the number and complexity of test instruments carried in the field. JDSU's OFI module for the MTS/T-BERD platforms was developed in response to these issues. Configurable at the time of order, this module uses intuitive test functions and simple PASS/FAIL displays to enhance productivity and reduce the burden of training. Technicians can easily process cables with high fiber counts as well as quickly generate professional proof-of-performance reports using JDSU's report-generation software.

#### Multitest platforms

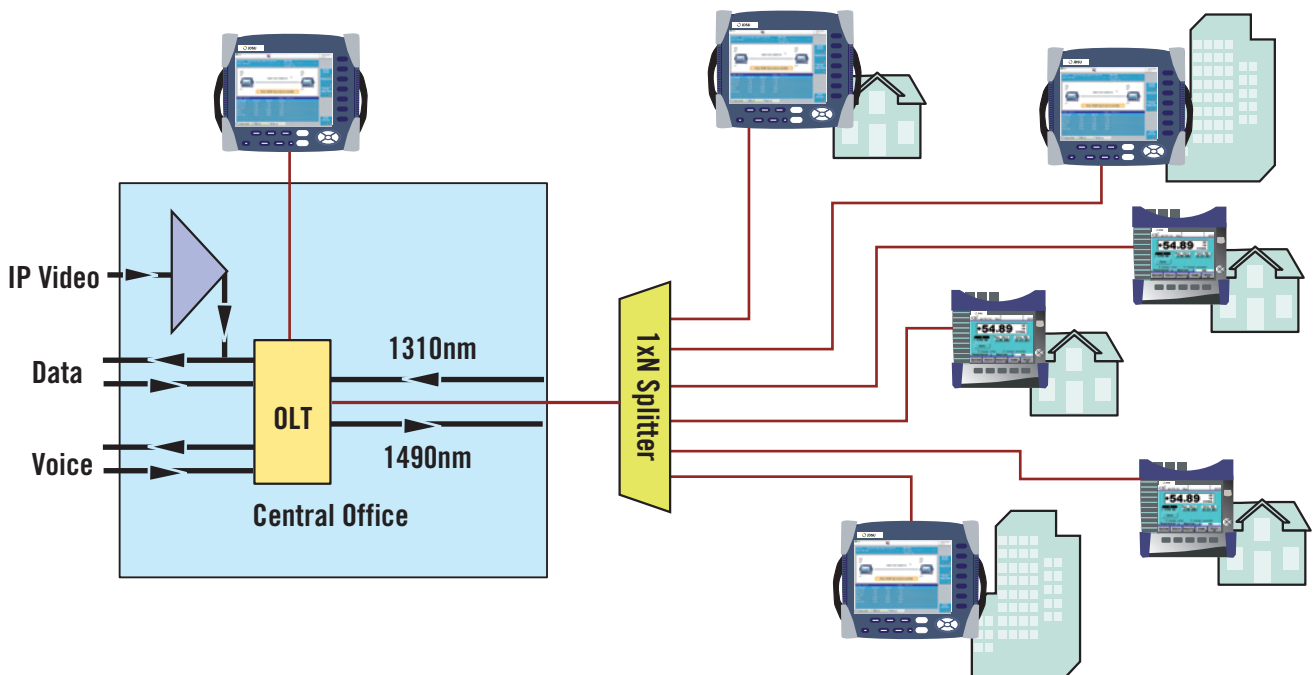
The MTS/T-BERD platforms' scalable design let field technicians quickly and easily plug in the multifunction loss test module and perform precise measurements in the outside plant all the way to the central office. The MTS/T-BERD platforms also include a full range of OTDR, PMD, chromatic dispersion, spectral attenuation, and DWDM test modules.

### Best in class for FTTx testing and high fiber-count cables

The OFI module's automated test functions combined with an intuitive user interface help fiber installers and technicians save time and reduce costs while operating in the field.

- Automated bi-directional loss test set for continuity check, fiber loss, return loss and length
- Testing at telecom wavelengths 1310, 1550, and 1625 nm
- Testing at FTTx/PONs wavelengths 1310, 1490, and 1550 nm
- Accurate ORL measurements on a very short span such as FTTx

Housed in the MTS/T-BERD optical test mainframe, the OFI module is easily set up for referencing insertion loss and ORL measurements using an on-screen step-by-step guide. The OFI module has an integrated precise standalone power meter to enhance referencing and improve insertion loss measurement accuracy. In addition, the instrument can be operated in continuous light source mode for fiber identification or unidirectional loss measurement.



### Improve productivity and efficiency in the field

The OFI module includes several features to improve productivity and reduce the time it takes to test cables with high fiber counts. The user is guided through the test setup and with a single key press can test, display, and record measurements on each instrument at both ends of the link.

The OFI module's advanced design enables users to:

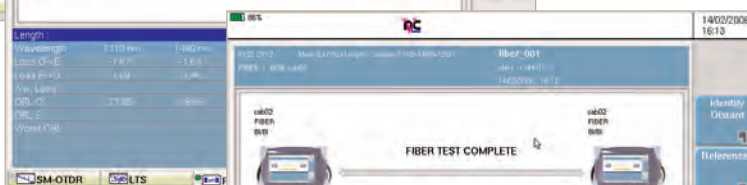
- Cut down testing time drastically: Evaluate fiber continuity, loss, ORL and length and get all results on both test ends within 15 seconds/fiber.
- Store complete test results in both test units and generate on-site reports (master-master system).
- Replicate stored test results between the near-end and remote unit to ensure integrity of data
- Minimize handling errors with the Pass/Fail indicator. In a quick snapshot both end technicians can identify incorrect results.



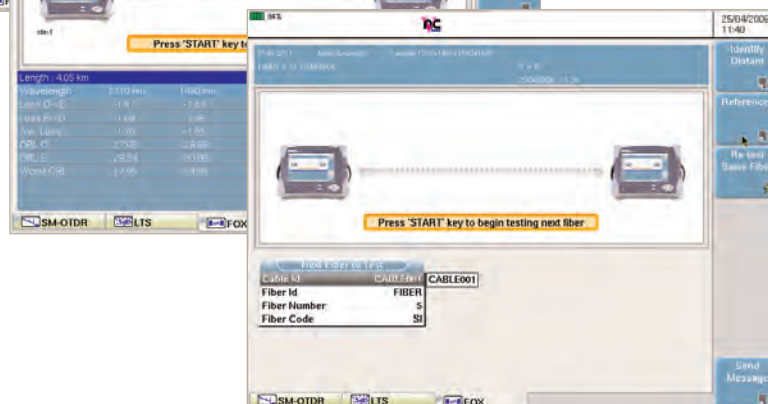
Referencing with graphical user interface



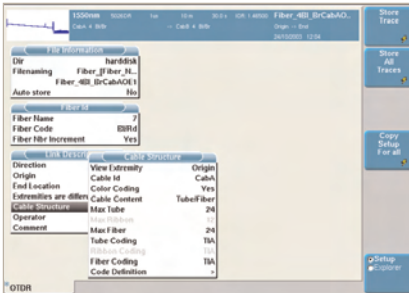
Multi-acquisition using the OFI mode



View results in one table with Pass/Fail indicator



Ready to test next fiber!



### Extended cable management and documentation

The user defines and stores information on the link configuration and cable structure. This includes all the details such as identification, color coding, and fiber numbers, which can be archived and made available to each OFI at both ends of the cable. For example:

- Color coding management TIA/EIA is either standard or user definable. The unit will automatically decode the fiber number and help the user identify fibers.
- Relevant cable test information is consolidated into one table.
- Fiber is identified by number and color code.
- Loss alarm thresholds (loss, return loss, lengths) are generated.

With the layout of cable results, the user can rapidly identify missing records and/or “fail” values.

# Insertion loss table

test

Origin location:

330

End location:

330

Fiber ID	Color	Loss 1550 nm			Loss 1310 nm		
		Q=H	R=H	Average	Q=H	R=H	Average
FBP00001 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00002 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00003 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00004 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00005 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00006 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00007 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00008 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00009 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00010 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00011 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00012 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00013 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00014 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00015 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00016 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00017 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00018 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00019 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00020 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00021 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00022 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00023 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00024 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00025 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00026 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00027 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00028 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00029 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00030 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00031 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00032 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00033 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00034 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00035 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00036 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00037 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00038 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00039 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00040 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00041 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00042 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00043 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00044 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00045 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00046 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00047 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00048 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00049 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00050 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00051 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00052 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00053 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00054 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00055 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00056 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00057 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00058 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00059 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00060 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00061 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00062 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00063 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00064 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00065 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00066 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00067 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00068 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00069 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00070 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00071 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00072 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00073 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00074 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00075 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00076 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00077 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00078 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00079 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00080 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00081 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00082 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00083 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00084 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00085 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00086 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00087 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00088 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00089 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00090 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00091 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00092 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00093 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00094 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00095 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00096 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00097 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00098 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00099 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	
FBP00100 80.80	-2.50	-2.50	-2.50	-1.82	-1.70	-1.85	

Example of test report

### Error-free professional reports

Complete PC-based software within a true Windows environment enables the generation of detailed, professional insertion loss, return loss, and length reports. In addition, the OFI module provides:

- Proof-of-performance reports with the ability to customize high-level job information.
- Dedicated tables for each test results (loss, ORL, length).
- Out-of-range values summary.
- Results comparisons between the different wavelengths to sort out bends and constraints.
- Integration of insertion loss, ORL, and length measurements into complete fiber characterization.



MTS/T-BERD 8000 Platform with OTDR  
and OFI Modules



OFI-2000 Multifunction Loss Test Set

### Enhanced testing solution

With the addition of the OFI module to the MTS/T-BERD platforms, technicians can fully characterize the fiber network with an all-in-one solution for measuring:

- Insertion loss
- Return loss
- OTDR
- Chromatic dispersion
- PMD
- Attenuation profile

### Compatible with the standalone OFI-2000

The OFI multifunction loss test module can be used at one end and a JDSU OFI-2000 Multifunction Loss Test Set at the other end to perform continuity check, bi-directional loss, return loss and length measurements. Communication between both products can then be enabled through the optical talk set or via the Short Message System.

**81xxOFIx Module**
**General technical specifications  
(typical at 25° C)**

Weight	0.6 kg (1.1 lbs)
Dimensions (w x h x d)	213 x 124 x 32 mm (8.38 x 4.88 x 1.26 in)

**Optical interfaces**

Applicable fiber	SMF 9/125 µm
Interchangeable optical connectors	FC, SC, DIN, etc...

**Bi-directional test set specifications  
(typical at 25° C)**

This does apply to the 812xOFI modules  
To ensure optimal use (bi-directional measurement and communication), two units are required.

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

Laser type	Class 1 laser
Wavelength at 25° C	
1310+/-20 nm, 1490+/-3 nm, 1550+/-30 nm, 1625+/-5 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
<b>Level stability</b>	
Short term 15 min (T = +/-0.3 K)	+/- 0.02 dB
Long term 8 hours (T = +/-3 K)	+/- 0.2 dB
Modulation frequencies	Continuous wave, 270 Hz, 330 Hz, 1 kHz, 2 kHz
TWIntest and auto-I	All wavelength activated one after the other

**Loss test set function**

Dynamic range	60 dB
Accuracy	Loop back +/-0.25 dB /side-by-side +/-0.15 dB
Result resolution	0.01 dB

**Optical return Loss (also valid for  
manual ORL)**

ORL measurement display range	Up to 65 dB (Limited to front end connector, APC recommended)
Accuracy	+/-0.5dB

**Length function**

Distance Accuracy	L<3 km: +/-50 m, 3 km<L<200 km : +/-1.5%
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**Standalone power meter**

Wavelength range (adjustable per 1 nm)	800-1650 nm
Selectable wavelength	850/980/1300/1310/1420/1450/1480/1490/1510/ 1550/1625 nm and one user-defined
Auto-I detection (incl. TWIntest)	850/1310/1490/1550/1625 nm
Modulation detection	270 Hz, 330 Hz, 1 kHz, 2 kHz
Display resolution	0.01 dB
<b>Power level</b>	<b>Standard</b> <b>High Power</b>
Dynamic range	+10 to -60 dBm +26 to -55 dBm
Accuracy	+/-0.2 dB +/- 0.25 dB
(1310nm, -20dBm)	
Detector type	Ge filtered InGaAs, 2 mm

**Ordering information**
**OFI Module**

1310/1550nm OFI plug-in module-standard power	E81260FI1
1310/1550nm OFI plug-in module-high power	E81260FI2
1310/1550/1625nm OFI plug-in module- standard power	E81360FI1
1310/1550/1625nm OFI plug-in module- high power	E81360FI2
1310/1490/1550nm OFI plug-in module- standard power	E81320FI1
1310/1490/1550nm OFI plug-in module high power	E81320FI2

**OFI Module option**

ORL option for OFI plug-in module with mandrel	E810FIORL
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**Application software**

Optical Fiber Trace Software for post-analysis	EOF5100
Optical Fiber Cable Software Cable for Acceptance report generation	EOF5200

**Universal Optical connectors**

EUNIPCF, EUNIPCSC, EUNIPCST, EUNIPCDIN, EUNIPCLC	
EUNIAPCF, EUNIAPCSC, EUNIAPCST, EUNIAPCDIN, EUNIAPCLC	

For more information on test adapters, cables, and fiber optic couplers, please refer to the separate datasheet entitled "JDSU Fiber Optic Test Adapters and Cables"

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