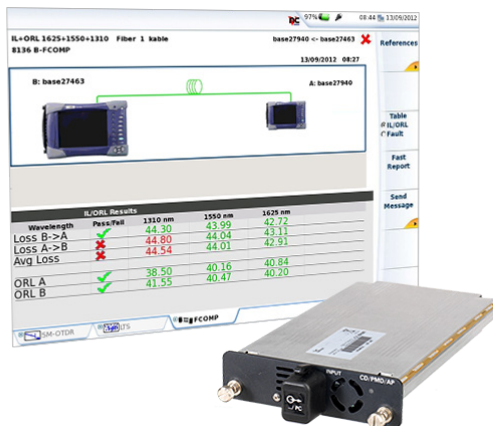VIAVI Solutions

VIAVI
T-BERD®/MTS-6000A and –8000 Platforms
8100-Series FiberComplete™ EVO Module Family

FiberComplete is the first solution to perform all the fundamental fiber-qualification tests, such as bidirectional insertion loss (IL), optical return loss (ORL), and optical time domain reflectometry (OTDR), with one module from one optical port.

You can now equip each technician with a single piece of equipment that fulfills all of the traditional fiber testing requirements. The VIAVI Solutions 8100-Series FiberComplete EVO Module Family for the T-BERD/MTS-6000A and T-BERD/MTS-8000 (V2) offers the most complete fiber-testing solution for quick, easy use in characterizing point-to-point or point-to-multipoint passive-optical networks (PON).

Benefits

- One powerful unit equips field technicians with all the traditional fiber tests they need
- Cuts testing almost in half with fewer connections and disconnections, automatic continuity check, and an intelligent fault finder
- Minimizes training and gets reliable measurements using a single connection port that combines a fully automated process with easy-to-read results
- Optimizes workflow: Compiles test results into one complete cable view and automatically stores measurements

Features

- Make one connection, one-touch automated measurements
- Real-time continuity check and automatic product pairing
- Manage fiber and cable results
- Step-by-step wizard lets you reference initial IL/ORL tests

Applications

- Measure bidirectional OTDR, IL, and ORL with one unit
- Troubleshoot in FaultFinder mode for immediate results
- Conduct acceptance tests in Bidirectional OTDR mode

Platform Compatibility

T-BERD/MTS-6000A

Compact multilayer platform for network installation and maintenance

T-BERD/MTS-8000 V2

Scalable platform for multiple-layer and multiple-protocol testing

Specifications (Typical at 25°C)

General

Weight	0.6 kg (1.1 lb)
Dimensions (W x H x D)	213 x 124 x 32 mm (8.38 x 4.88 x 1.26 in)
Applicable fiber	SMF 9/125 μm
Interchangeable optical connectors	FC, SC, DIN, LC (PC or APC), and ST (PC)

Built-in Power Meter (Mainframe)

T-BERD/MTS mainframes require the broadband power meter option for referencing.

Measurement range	+10 to −60 dBm
Absolute uncertainty	±0.2 dB
Wavelength range	800 to 1650 nm

OTDR

	8100B	8100C
Central Wavelength	1310/1550/1625 nm	1310/1490/1550/1625 nm
Pulse Width	5 ns to 20 μs	2 ns to 20 μs
RMS Dynamic Range[1]	42/40/40 dB	47.5/46/47/47.5 dB
Event Dead Zone[2]	0.65 m	0.60 m
Attenuation Dead Zone[3]	2 m	2 m

Optical Source

Laser safety class (21 CFR)	Class 1
Wavelengths	Same as those for the OTDR
Output power level (CW mode)	−3.5 dBm[4]
Stability	<±0.1 dB at 25°C over 1 hr
Operating modes	CW, 270 Hz, 330 Hz, 1 kHz, 2 kHz, TWINtest

Power Meter

Calibrated wavelengths	1310, 1490, 1550, 1625 nm
Power range	−3 to −55 dBm
Typical uncertainty[5]	±0.5 dB at −30 dBm

Bidirectional Test Set

Wavelength at 25°C	1310 ±20 nm, 1490 ±20 nm, 1550 ±20 nm, 1625 ±20 nm

Insertion Loss

Reference methods	Loopback and side by side
Dynamic range	42 dB
Typical uncertainty[6]	±0.2 dB
Repeatability[7]	<0.05 dB

Optical Return Loss

Measurement range[8]	Up to 55 dB
Typical uncertainty[9]	±0.9 dB
Repeatability	<0.1 dB

1. The one-way difference between the extrapolated backscattering level at the start of the fiber and the RMS noise level after 3 minutes averaging using the largest pulse width.
2. Measured at ±1.5 dB down from the peak of an unsaturated reflective event using the shortest pulse width.
3. Measured at ±0.5 dB from the linear regression using a FC/PC reflectance and using the shortest pulse width.
4. Subtract 3 dB when used in modulation mode (270/330/1 kHz/2 kHz).
5. At calibrated wavelengths.
6. Side-by-side referencing.
7. 10 consecutive measurements without disconnecting.
8. With APC connector.
9. From 10 to 45 dB.

Ordering Information

Description	Part Number
FiberComplete Module with OTDR and FaultFinder Functions*	
1310/1550 nm FiberComplete with 8100B OTDR	E8126B-FCOMP
1310/1550 nm FiberComplete with 8100C OTDR	E8126C-FCOMP
1310/1550/1625 nm FiberComplete with 8100B OTDR	E8136B-FCOMP
1310/1550/1625 nm FiberComplete with 8100C OTDR	E8136C-FCOMP
1310/1490/1550 nm FiberComplete with 8100C OTDR	E8139C-FCOMP
Accessories	
SC/PC and SC/APC nonreflective terminators - FC/PC and FC/APC nonreflective terminators - LC/PC nonreflective terminator	ENRTERMSC ENRTERMFC ENRTERMLC
Nonreflective optical terminator kit	ENRTERMKIT
LC mating sleeve - FC mating sleeve - SC mating sleeve	EMSSMLC- S3101 - S3111

* All FiberComplete modules come standard with a kit of nonreflective terminations and their respective mating sleeves for zero ORL referencing (equivalent to a mandrel) and a built-in light source option.

For more information about the T-BERD/MTS-6000A and -8000 test platforms, refer to their respective data sheets.

VIAVI Care Support Plans

Increase your productivity for up to 5 years with optional VIAVI Care Support Plans:

- Maximize your time with on-demand training, priority technical application support and rapid service.
- Maintain your equipment for peak performance at a low, predictable cost.

For more Information: go to viavisolutions.com/viavicareplan

Features

*5-year plans only

Plan	Objective	Technical Assistance	Factory Repair	Priority Service	Self-paced Training	5 Year Battery and Bag Coverage	Factory Calibration
BronzeCare	Technician Efficiency	**Premium**	✓	✓	✓		
SilverCare	Maintenance & Measurement Accuracy	**Premium**	✓	✓	✓	✓*	✓