

Data Sheet

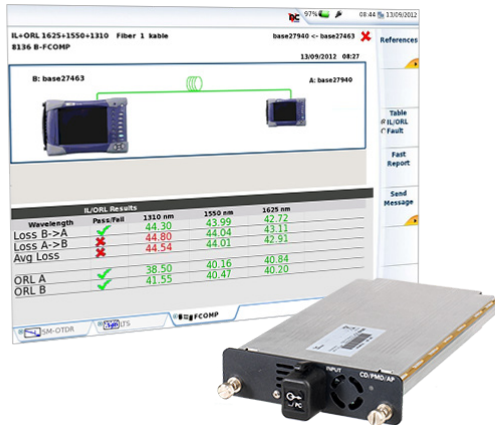
VIAVI

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).



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

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

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 |

- 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.
- Measured at ±1.5 dB down from the peak of an unsaturated reflective event using the shortest pulse width.
- Measured at ±0.5 dB from the linear regression using a FC/PC reflectance and using the shortest pulse width.
- Subtract 3 dB when used in modulation mode (270/330/1 kHz/2 kHz).
- At calibrated wavelengths.
- Side-by-side referencing.
- 10 consecutive measurements without disconnecting.
- With APC connector.
- 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.