VIAVI Solutions

Data Sheet

VIAVI T-BERD/MTS
4100-Series FiberComplete Module
For T-BERD/MTS-2000,-4000 V2, -5800V2 Platforms

FiberComplete™ is the first solution to fully automate 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 4100-Series FiberComplete module for the dual-slot T-BERD/MTS-4000 V2, single-slot T-BERD®/MTS-2000 and T-BERD/MTS-5800V2 handheld 10/100G network tester offers the most complete fiber-testing solution for quick and easy use in characterizing point-to-point or point-to-multipoint passive-optical networks (PON).

Key Benefits
- One powerful unit equips field technicians with all the traditional fiber tests they need
- Cuts test time by more than 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, automatically stores measurements

Key Features
- Make one connection, one-touch automated measurements
- Full setup and data exchange between near end and far end units for fewer mistakes and retests
- Smart Link Mapper (SLM) icon-based map view of the fiber link
- Real-time continuity check and automatic product pairing
- Manage fiber and cable results
- Step-by-step wizard lets you reference initial IL/ORL tests
- Smart Access Anywhere (SAA) for remote control and field tech support
- StrataSync enabled for centralized cloud-based asset, configuration, test data and workflow management

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-2000**
One-slot handheld modular platform for fiber network testing

**T-BERD/MTS-4000 V2**
Two-slot handheld modular platform for testing fiber optic networks

**T-BERD/MTS-5800V2**
10/100G platform for multi-protocol network test
Specifications (Typical at 25°C)

**General**
- Weight: 0.35 kg (0.77 lb)
- Dimensions (w × h × d): 128 × 134 × 40 mm (5.04 × 5.28 × 1.58 in)
- Applicable fiber: SMF 9/125 µm
- Interchangeable optical connectors: FC, SC, LC (PC or APC), and ST (PC)

**Built-in Power Meter (Mainframe) T-BERD/MTS-2000, -4000 V2**
T-BERD/MTS mainframes require the broadband power meter option for referencing.
- Measurement range: +5 to −50 dBm
- Absolute uncertainty: ±0.2 dB
- Wavelength range: 800 to 1650 nm

<table>
<thead>
<tr>
<th>OTDR</th>
<th>Central Wavelength</th>
<th>Pulse Width</th>
<th>RMS Dynamic Range</th>
<th>Event Dead Zone</th>
<th>Attenuation Dead Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metro-Access/PON (MA3)</td>
<td>1310/1550/1625/1650 (filtered) nm</td>
<td>3 ns to 20 µs</td>
<td>43/41/41/41 dB</td>
<td>0.7 m</td>
<td>3 m</td>
</tr>
</tbody>
</table>

**Source Function (also valid for CW source mode)**
- Laser safety class (21 CFR): Class 1
- Wavelength at 25°C: 1310±20 nm, 1550±20 nm, 1625±10 nm
- Spectral bandwidth: 10 nm maximum
- Output level into 9/125 µm fiber (CW mode): −3.5 dBm
- Modulated output average level: 3 dB less
- Modulation frequencies: Continuous wave, 270 Hz, 330 Hz, 1 kHz, 2 kHz
- TWINtest and Auto-λ: All wavelengths activated consecutively

**Loss Test Set Function**

**Insertion Loss**
- Loss range: 40 dB
- Absolute uncertainty: ±0.25 dB
- Repeatability: <0.05 dB
- Result resolution: 0.01 dB

**Optical Return Loss**
- ORL measurement range: Up to 55 dB
- Absolute uncertainty: ±0.9 dB
- Repeatability: <0.01 dB

**Length**
- Measurement range: 150 km
- Absolute uncertainty: ±30 m

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1. Using side-by-side reference
2. Without disconnection
3. From 20 to 40 dB range
4. Measurement @ 1550 nm with an index of refraction n = 1.468 For the OTDR
## Ordering Information

**FiberComplete Module with OTDR and FaultFinder Functions**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1310/1550 nm FiberComplete with 43/41 dB MA3 OTDR</td>
<td>E4126MA3FCO^5</td>
</tr>
<tr>
<td>1310/1550/1625 nm FiberComplete with 43/41/41 dB MA3 OTDR</td>
<td>E4136MA3FCO^5</td>
</tr>
<tr>
<td>1310/1550/F1650 nm FiberComplete with 43/41/41 dB MA3 OTDR</td>
<td>E4138FMA365FCO-APC</td>
</tr>
<tr>
<td>1310/1550 nm FiberComplete with Fault Finder</td>
<td>E4126FCOFF</td>
</tr>
<tr>
<td>1310/1550/1625 nm FiberComplete with Fault Finder</td>
<td>E4136FCOFF</td>
</tr>
</tbody>
</table>

### Options

- FiberComplete upgrade to add OTDR Function: EFCOMPOTDR-UPG

### Accessories

- Digital videoscope kit, including P5000i probe, soft case, and 7 inspection tips: ESDFSCOPESKI
- Optical Fiber Trace software: EOFS100
- SC/PC and SC/APC nonreflective terminators - FC/PC and FC/APC nonreflective terminators - LC/PC non-reflective terminator: ENRTERMSC - ENRTERMFC - ENRTERMLC
- LC mating sleeve - FC mating sleeve - SC mating sleeve: EMSSMLC - S3101 - S3111
- Nonreflective optical terminators kit: ENRTERMKIT

^5 OTDR function available with E4126MA3FCO, E4136MA3FCO and E4138FMA365FCO-APC.
^6 Only 1310 & 1550 nm used in FiberComplete application.

*All FiberComplete modules come standard with SC, LC, and FC nonreflective terminations for zero ORL referencing (equivalent to a mandrel) and built-in light source option.*