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).

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

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

Specifications (Typical at 25ºC)

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
OTDR					
	Central Wavelength	**Pulse Width**	**RMS Dynamic Range**	**Event Dead Zone**	**Attenuation Dead Zone**
Metro-Access/PON (MA3)	1310/1550/1625/1650 (filtered) nm	3 ns to 20 µs	43/41/41/41 dB	0.7 m	3 m
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[1]
Repeatability					<0.05 dB[2]
Result resolution					0.01 dB
Optical Return Loss					
ORL measurement range					Up to 55 dB
Absolute uncertainty					±0.9 dB[3]
Repeatability					<0.01 dB[3]
Length[4]					
Measurement range					150 km
Absolute uncertainty					±30m

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*	
Description	**Part Number**
1310/1550 nm FiberComplete with 43/41 dB MA3 OTDR	E4126MA3FCO[5]
1310/1550/1625 nm FiberComplete with 43/41/41 dB MA3 OTDR	E4136MA3FCO[5]
1310/1550/F1650 nm FiberComplete with 43/41/41 dB MA3 OTDR	E4138FMA365FCO-APC [5, 6]
1310/1550 nm FiberComplete with Fault Finder	E4126FCOFF
1310/1550/1625 nm FiberComplete with Fault Finder	E4136FCOFF
Options	
FiberComplete upgrade to add OTDR Function	EFCOMPOTDR-UPG
Accessories	
Digital videoscope kit, including P5000i probe, soft case, and 7 inspection tips	ESDFSCOPE5KI
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.

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