

Data Sheet

VIAVI

4100-Series FiberComplete PRO Module

For T-BERD/MTS-2000 V2, -4000 V2 and OneAdvisor 800 Platforms

FiberComplete PRO™ 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 T-BERD/MTS-2000 V2, 4000 V2 and OneAdvisor 800 platforms 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 V2



One-slot handheld modular platform for fiber network testing

T-BERD/MTS-4000 V2



Two-slot handheld modular platform for testing fiber optic networks

OneAdvisor 800



Modular Test Platform designed for the installation and maintenance of wireline and wireless networks

Features and Benefits

- Save time up to 80%:
 - Finish jobs sooner, fastest full bi-directional fiber solution with automatic loss measurement averaging
 - Ensure workflow efficiency and consistency for your technicians and contractors
 - Direct submit your reports to the cloud (StrataSync TPA suite)
- Measure with confidence:
 - Limit call backs and repeats, perform corrections as you test
 - Eliminate off-site or post processing work and review time
 - Remove test complexity, manual processes, and risk of human errors

Applications

- Network new build and maintenance:
 - Data center (structured cabling, campus, interconnect)
 - Access FTTx, mobile fronthaul
 - CATV Distributed Access Architecture
 - Wireless backhaul / CRAN / 5G x-haul
 - Metro and Core / Long haul Networks



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)

Built-in Mainframe Power Meter T-BERD/MTS-2000 V2, -4000 V2, OneAdvisor 800 (refer to the "Mainframe user manual" for the complete list of the powermeter specifications)

T-BERD/MTS or OneAdvisor 800 mainframes require the broadband power meter option for referencing (Loss Test Set Function) 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
4100 B	1310/1550/1625/1650 nm	5 ns to 20 μs	42/40/40/40 dB	0.65 m	2.5 m

Please refer to "4100 series OTDR B module data sheet" for all the other OTDR specifications including the power meter option

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
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
Stability (over 8h)	±0.1 dB
Output power accuracy	±0.65 dB

Loss Test Set Function

Insertion Loss

Loss range	40 dB ¹
Uncertainty	±0.2 dB ²
Repeatability	<0.05 dB ³
Result resolution	0.01 dB

Optical Return Loss

ORL display range	Up to 55 dB ⁴
Uncertainty	±0.5 dB ⁵

Length⁶

Measurement range	150 km
Uncertainty	0/+5 m ± 0.001% x distance

- 35 dB with Multi-Fiber MPO based Switch Module
- With / without the Multi-Fiber MPO base switch module
- Without disconnection
- Up to 45 dB with Multi-Fiber MPO based Switch Module
- From 10 to 45 dB range. +/-1 dB with Multi-Fiber MPO based Switch Module
- Measurement @ 1550 nm with an index of refraction n = 1.468

- VIAVI T-BERD/MTS 4100-Series FiberComplete PRO Module

Software Option Selection Table

Description	IL/ORL (CW mode)	OTDR		
	Bi-dir	Uni-dir	Automatic LOOPBACK	Automatic TrueBIDIR bi-directional analysis
4100 Module B FiberComplete	✓	✓	SW option 1 or 3	SW option 2 or 4
4100 Module B FiberComplete FaultFinder	✓	✗	✗	✗

Ordering Information

FiberComplete Module with OTDR and FaultFinder Functions*	
Description	Part Number
4100 Module B FiberComplete - 1310/1550 nm - PC/APC	E4126B-FCOMP-PC/-APC
4100 Module B FiberComplete - 1310/1550/1625 nm - PC/APC	E4136B-FCOMP-PC/-APC
4100 Module B FiberComplete - 1310/1550/Filtered 1650 nm - APC	E4138FB65-FCOMP-APC ⁷
4100 Module FiberComplete FaultFinder - 1310/1550 nm - APC	E4126-FCOMPFF-APC
4100 Module FiberComplete FaultFinder - 1310/1550/1625 nm - APC	E4136-FCOMPFF-APC
Software Options for New Modules	
OTDR LoopBack SW license (option 1)	ELOOPBACK-FCOMP-PRO
TrueBIDIR (bi-directional OTDR analysis) SW license (option 2)	ETRUEBIDIR-FCOMP-PRO
Software Options for Existing Installed Modules	
OTDR Loopback SW license Upgrade (option 3)	ELOOPBACK-FCOMP-PRO-UPG
TrueBIDIR (bi-directional OTDR analysis) SW license Upgrade (option 4)	ETRUEBIDIR-FCOMP-PRO-UPG
High Fiber Count Switch Module	
Singlemode MPO Switch Module - 1x12 Pinned MPO	E41MPO12SM
Accessories	
Digital videoscope kit, including P5000i probe, soft case, and 7 inspection tips	ESDFSCOPE5KI
Optical Fiber Cable software	EOFS200
20 m SM Fiber Launch Cable SC/APC to SC/APC	ELCSM20M-SCA-SCA
150 m SM Fiber Launch Cable SC/APC to SC/APC	ELCSM150M-SCA-SCA

7. Only 1310 & 1550 nm used in FiberComplete application

*FiberComplete Modules delivered with:

- Built-in light source
- Built-in power meter source
- Connector output : SC PC or SC APC
- SC and LC nonreflective terminations for zero ORL referencing (equivalent to a mandrel). Mandatory use when bend insensitive test cords or PC connectors are used.

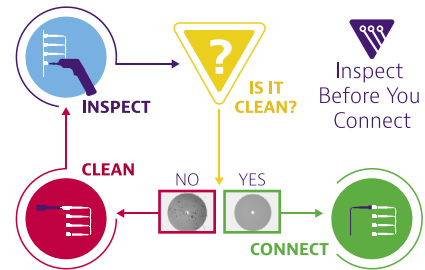
3 VIAVI T-BERD/MTS 4100-Series FiberComplete PRO Module

Test Process Automation (TPA)

Allows your team to deliver expert-level test results and close projects on the first try, every time. TPA is a closed loop test system that optimizes workflows, eliminates manual, error prone work and automates immediate data reporting for job close out, team progress updates and network health analytics. Execute jobs efficiently to ensure high quality network builds, rapid turn-up/activation and enhanced operational visibility.

Inspect Before You Connect (IBYC)

Contamination is the number 1 reason for troubleshooting optical networks. Proactive inspection and cleaning of fiber connectors can prevent poor signal performance, equipment damage, and network downtime.



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.

Plan availability depends on product and region. Not all plans are available for each product or in every region. To find out which VIAVI Care Support Plan options are available for this product in your region, contact your local representative or visit: 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	Accessory Coverage	Express Loaner
 BronzeCare	Technician Efficiency	Premium	✓	✓	✓				
 SilverCare	Maintenance & Measurement Accuracy	Premium	✓	✓	✓	✓*	✓		
 MaxCare	High Availability	Premium	✓	✓	✓	✓*	✓	✓	✓

© 2023 VIAVI Solutions Inc.
Product specifications and descriptions in this document are subject to change without notice. Patented as described at viavisolutions.com/patents fibercompletepro-ds-fop-tm-ae 30168342 915 0523