

# VIAVI

## DWDM OTDR Module (4100-Series)

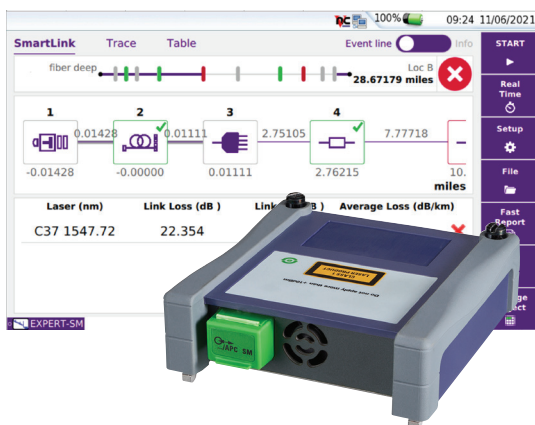
For T-BERD®/MTS-2000, –4000 V2, –5800, CellAdvisor 5G and OneAdvisor 800 Platforms

As xWDM technology adoption continues to grow in access networks for broadband services, technicians require comprehensive and lightweight xWDM test tools. Consisting of a single module, the VIAVI C-band DWDM OTDR solution enables cable, wireless, and telco operators to perform complete end-to-end link characterization and troubleshooting of DWDM and hybrid CWDM/DWDM networks.

The DWDM OTDR module’s optical performance, combined with the complete suite of platform enabled testing features, ensures that comprehensive testing is done right the first time.

### Standard testing features include:

- Auto-setting of the acquisition parameters
- Summary results table with pass/fail analysis per the international standards
- Comprehensive event diagnosis
- FastReport onboard report generation



### Key Benefits

- Characterize fiber links with exact DWDM wavelengths
- Troubleshoot live networks with in-service testing capability via MUX and Common (test) port
- Verify end-to-end continuity through MUX/ DEMUX and ROADMs using the continuous wave source function
- Automatically identify and test DWDM port channel/link with patented Wavescan
- Avoid accidental transceiver damage with SFP Protect

### Key Features

- C-Band (1528 nm to 1568 nm) tunable filter DWDM OTDR module at ITU-T G.694.1 wavelengths (CH12 to CH62)
- Integrated CW light source with modulation capability
- Instantaneous traffic detection
- Automatically identify Mux and Demux components with SmartLink Mapper
- Tunable filter HW optional

### Applications

- Metro and access rings, business to business, advanced C-RAN fronthauls and next gen FTTH networks
- Qualification of fronthaul access networks
- Testing new DWDM wavelength routes without disrupting traffic on active channels
- Pinpointing faults and their exact locations while in service



## Specifications (typical at 25°C)

General	
Laser safety	Class 1 (IEC), Class 1 (21CFR)
Weight	510 g (1.12 lb)
Dimensions (w x h x d)	128 x 134 x 40 mm (5 x 5.28 x 1.58 in)
Operating and Storage temperature	Refer to platform's datasheet
Distance units	Km/m/mile/ft
Group index range	1.30000 to 1.70000 in 0.00001 steps
Number of data points	Up to 256,000 data points

### Distance Measurements

Mode	Automatic or dual cursor
Display range	From 0.5 up to 260 km
Display resolution	1 cm
Cursor resolution	From 1 cm
Sampling resolution	From 32 cm
Accuracy	±0.75 m ±sampling resolution ±1.10 <sup>-5</sup> * x distance (excluding group index uncertainties)

### Attenuation Measurements

Mode	Automatic, manual, 2-point, 5-point and LSA
Display range	From 1.25 dB to 55 dB
Display resolution	0.001 dB
Attenuation linearity	±0.03 dB/dB
Threshold	0.01 to 5.99 dB in 0.01 dB step
Cursor resolution	From 0.001 dB

### Reflectance/ORL Measurements

Mode	Automatic or manual
Reflectance accuracy	±2 dB
Display resolution	0.01 dB
Threshold	-11 to -99 dB in 1 dB steps
Storage	Bellcore/Telcordia compatible Version 1.1 and Version 2.0

### OTDR and Light Source

Wavelengths <sup>1</sup>	C-band tuning – C62 to C12 (1527.99 nm – 1567.95 nm) @ 100 GHz
Channel spacing	50/100/200 GHz
Pulsewidth	10 ns to 20 µs
Dynamic range <sup>2</sup>	44dB (non filtered) 42.5 dB (filtered)
Event dead zone <sup>3</sup>	1.5 m
Attenuation dead zone <sup>4</sup>	4 m
Light source Wavelengths	Same as OTDR
Light Source Output Power Level	0 dBm
Light Source Operating Modes <sup>5</sup>	CW, 270 Hz, 330 Hz, 1 kHz, 2 kHz
Automatic traffic detection	Yes
In-service testing	Yes

1. Laser at 25°C and measured at 10 µs.
2. The one-way difference between the extrapolated backscattering level at the start of the fiber and the RMS noise level, after 3 minutes averaging and using the largest pulsewidth.
3. Measured at ±1.5 dB down from the peak of an unsaturated reflective event using the shortest pulsewidth.
4. Measured at ±0.5 dB from the linear regression using a FC/PC reflectance and using the shortest pulsewidth.
5. Subtract 3 dB when used in modulation mode (270/330/1/2 kHz).

## Ordering Information

Description	Part Number
<b>4100 DWDM OTDR Modules</b>	
DWDM OTDR Module	E41DWDMC-PC/-APC
Tunable Filter DWDM OTDR Module	E41FDWDMC-PC/-APC
Wavescan® SW option for DWDM OTDR Module	EWAVESCAN
SFP Protect SW option for DWDM OTDR Module	ESFPPROTECT

### Optical Adapters

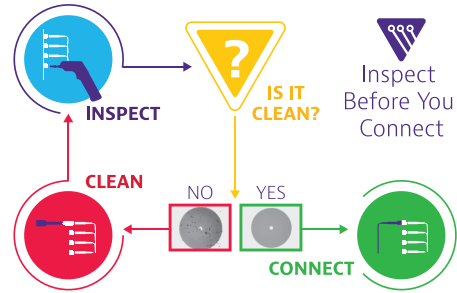
Switchable Adapters	EUSCADS, EUSCADS-APC, EUFCADS, EULCADS, EULCADS-APC
---------------------	---

## 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](https://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	✓	✓	✓	✓*	✓	✓	✓



Contact Us **+1 844 GO VIAVI**  
(+1 844 468 4284)

To reach the VIAVI office nearest you,  
visit [viavisolutions.com/contact](https://viavisolutions.com/contact)

© 2023 VIAVI Solutions Inc.  
Product specifications and descriptions in this document are subject to change without notice. Patented as described at [viavisolutions.com/patents](https://viavisolutions.com/patents) dwdmotdr-ds-fop-tm-ae 30186132 910 0523