

VIAVI 4100 Series

DWDM OTDR MODULES

The VIAVI DWDM OTDR solution enables performing a complete end-to-end link characterization and troubleshooting through MUX/DEMUX of newly deployed or active DWDM and Hybrid CWDM/DWDM networks. It's the perfect OTDR for cable, mobile, and telecommunications operators dealing with C-RAN and mobile front haul access networks, passive DWDM networks for cable TV business services, and next-generation FTTH networks.



- Tunable DWDM OTDR module at ITU-T G.694.1 wavelengths
- C-band - 1528 nm to 1568 nm
- 44 dB dynamic range for access and metro applications
- Integrated CW light source with modulation capability
- Instantaneous traffic detection

SPECIFICATIONS

GENERAL (TYPICAL AT 25°C)	
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 ±1.10-5* 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 ¹	C-band tuning – C62 to C12 (1527.99nm –1567.95nm) @ 100GHz
Channel spacing	50/100/200GHz
Pulsewidth	10 ns to 20 µs
Dynamic range ²	44 dB
Event dead zone ³	1.5 m
Attenuation dead zone ⁴	4 m
Light source Wavelengths	Same as OTDR
Light Source Output Power	0 dBm
Light Source Operating Modes ⁵	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
4100 DWDM OTDR Modules	
Tunable DWDM OTDR Module - PC	E41DWDMC-PC
Tunable DWDM OTDR Module – APC	E41DWDMC-APC
Optical Adapters	
Switchable Adapters	EUSCADS, EUSCADSAPC, EUFCADS,EULCADS, EULCADS-APC