VIAVI Solutions | SAVITRI TELECOM SERVICES

Optical Dispersion Measurement Module (8100 Series)

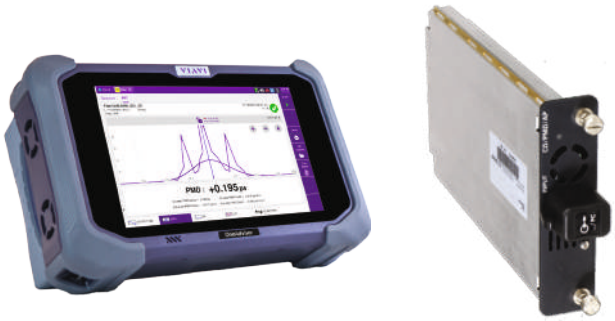
For OneAdvisor 800 platform

The VIAVI Optical Dispersion Measurement (ODM) module is a compact, single test port, field test solution combining Chromatic Dispersion (CD), Polarization Mode Dispersion (PMD) and Attenuation Profile (AP) measurements in a single module.

Fiber optic cables are essential to delivering high-speed data services however, as data rates/modulation schemes continue to increase, dispersion effects become more pronounced, especially for high-speed services.

Dispersion testing enables high speed network owner/operators and dark fiber providers to identify any potential issues with fibers and take corrective measures promptly. Ensuring optimal network performance from day 1 while reducing downtime to prevent revenue loss due to network disruptions. Furthermore, dispersion testing can help network owners comply with industry standards and regulations, ensuring that their networks are secure and reliable.

Rapidly deploy 400G/800G and beyond with flawless first-time activation by comprehensively validating all aspects of solid and hollow core fibers (CD, PMD, AP, IL, ORL, OTDR) with a single test solution.



OneAdvisor 800 All-in-One wireline and wireless network installation and maintenance test solution

KEY FEATURES

- Smallest, lightest all-in-one solution for CD, PMD and AP
- Single module solution for streamlined workflow, no module switch-out/over
- Single connection and fast measurement time for quicker job closeout
- Industry's most integrated dispersion test solution for fiber optic networks
- Patented phase-shift solution for CD measurement

USE CASES AND APPLICATIONS

- Complete and accurate fiber characterization of high-speed networks (10 to 1,6Tb/s and beyond)
- Base-line testing for any CWDM/DWDM system including amplified links
- Hollow core fiber certification for medium and long range applications.
- Fully approved for medium and long distance datacenter interconnects (DCI)
- Qualify transport, metro, mobile backhaul, and medium-haul fiber optic links
- Identify unknown fiber types by combining results of 3 test parameters

Typical Specifications[1] at 25°C

Weight	600g (1.32lbs)
Dimensions (w × h × d)	213 × 124 × 32 mm (8.38 × 4.88 × 1.26 in)
Applicable fiber	SMF 9/125 µm and hollow core fiber
Interchangeable optical connectors	FC, SC, LC

Chromatic Dispersion

Description	**Long Range 81LRODM2**		**Medium Range 81MRODM2**	
Wavelength acquisition range	1260-1640 nm		1435-1640 nm	
Wavelength measurement range	1260-1650 nm		1260-1650 nm	
Wavelength uncertainty	±0.1 nm			
Minimum length	1 km			
Dynamic range[6]	45 dB		30 dB	
	55 dB2		40 dB2	
	80 km G652	**10 km G655**	**80 km G652**	**10 km G655**
Zero dispersion wavelength uncertainty (nm)	±1.5	±1.5	n/a	±4.5
Zero dispersion wavelength repeatability[3] (nm)	0.1	0.1	n/a	0.4
Dispersion uncertainty[4, 5] (ps/nm.km)	±0.05	±0.1	±0.06	±0.3
Dispersion repeatability[3, 4] (ps/nm.km)	0.007	0.007	0.04	0.04
Slope at zero wavelength repeatability[3]	0.5%	0.1%	n/a	n/a
Measurement time	40 s to 80 s		10 s to 30 s	

Polarization Mode Dispersion

Description	**Long Range 81LRODM2**	**Medium Range 81MRODM2**
Dynamic range[6]	58 dB	45 dB
	65 dB[2]	55 dB[2]
PMD measurement range[7]	0.08 to 130 ps	
PMD absolute uncertainty[8, 9]	±0.02 ps ±2% PMD	
PMD repeatability[8, 9]	0.025 ps	
Measurement time[10]	16 seconds, independent of PMD value	8 seconds, independent of PMD value

Attenuation Profile

Description	Long Range 81LRODM2	Medium Range 81MRODM2
Dynamic range[6]	54 dB	45 dB
	64 dB[2]	55 dB[2]
Wavelength uncertainty	±0.1 nm	
Measurement uncertainty[11]		
@ 1310 nm	0.006 dB/km	n/a
@ 1550 nm	±0.003 dB/km	
@ 1625 nm	±0.004 dB/km	
Measurement time[10]	6 seconds	3 seconds

[1]With broadband source module E81BBS2A unless specified
[2]With handheld broadband source OBS550 in High Dynamic mode
[3]Repeatability refers to the typical one-sigma standard deviation value, obtained for system cycling over 20 measurements
[4]1530-1570 nm band
[5]Excluding reference fiber uncertainties
[6]With averaging
[7]Up to 60 ps in strong mode coupling
[8]Weak mode coupling, between 0.1 ps and 60 ps DGD range
[9]Up to 35 dB attenuation and METAS standard traceable
[10]Minimum value without averaging
[11]Measured with 80 km G.652 fiber

Ordering Information

Optical Dispersion Measurement Modules	
Catalog number	Description
E81MRODM2-APC	Medium range Optical Dispersion Measurement module with APC connector
E81MRODM2-PC	Medium range Optical Dispersion Measurement module with PC connector
E81LRODM2-APC	Long range Optical Dispersion Measurement module with APC connector
E81LRODM2-PC	Long range Optical Dispersion Measurement module with PC connector
Broadband Sources	
Catalog number	Description
2279/32	Handheld Broadband Sources for CD/PMD/AP (1460–1640 nm)
2279/33	Handheld Broadband Sources for CD/PMD/AP (1460–1640 nm)
E81BBS2A-APC	Broadband Source module for CD/PMD/AP (1260–1640 nm) with APC connector
E81BBS2A-PC	Broadband Source module for CD/PMD/AP (1260–1640 nm) with PC connector
EUSCADS, EULCADS, EUFCADS	Universal PC connector adapters
EUSCADS-APC, EULCADS-APC, EUFCADS	Universal APC connector adapter

Quality Testing
Our products undergo rigorous quality testing before shipment to ensure their excellence.

Packaging
We meticulously package our products to guarantee they arrive at their destination in pristine condition.

Transport
We prioritize swift transportation, minimizing your waiting time to receive your order promptly.

Delivery
Our delivery service is designed to bring the products you've ordered directly to your doorstep, tailored to your specific preferences.

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