

WDM Channel Monitor (850 to 2000nm)

O-Band to U-Band, channel spacing 30 to 0.4nm, 100/50GHz

(patent pending)



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Features

- S-band, C-band, C+L band
- Up to 196 ITU Channel Scan
- High Stability
- Cost-Effective

Applications

- DWDM networks
- Fiber Sensing
- Test

The WDMD Series WDM Channel Monitor scans wavelength channels on ITU grids, covering all channels from the O-band to the U-band. It supports channel spacings ranging from coarse CWDM 30 nm down to DWDM 0.4 nm for 100 GHz and 50 GHz configurations, with scalability to accommodate any number of channels. The integrated detector offers a dynamic range > 50 dB. The system supports both multimode and single-mode fiber. For multimode fiber, the WDMD includes a valuable option to measure the mode field ratio, addressing the strong mode-dependent nature of optical power measurements in multimode operation. Channel optical power readings are provided through RS232 or USB interfaces, with a user-friendly GUI for control and data display.

O-band	1260 – 1360 nm
E-band	1360 – 1460 nm
S-band	1460 – 1530 nm
C-band	1530 – 1565 nm
L-band	1565 – 1625 nm
U-band	1625 – 1675 nm

Specifications

Parameter	Min	Typical	Max	Unit
Wavelength Range ^[1]	850		1630	nm
ITU Spacing	10000		50	GHz
Scan Resolution		ITU		
Scan Speed	0.1	3	5	ms
Bandwidth @-3dB	20	0.7	0.25	nm
Bandwidth @-20dB	50	0.75	-	nm
Polarization Dependent Loss	-	0.25	-	dB
Off-Band Suppression	-	45	-	dB
Measuring Range	-50	-	26	dBm
Measuring Resolution	0.01	-	-	dB
Optical Power Handling (CW)	-	-	500	mW
Operating Temperature	0	20	60	°C
Storage Temperature	-10		70	°C

Notes:

[1]. The transmission is only the wavelength band on the ITU grids, lights between the ITU are blocked.

Note: The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link](#):

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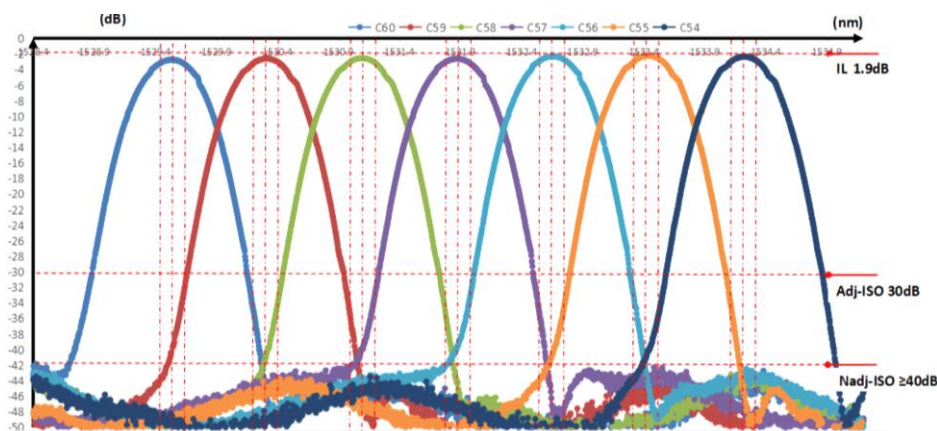


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Mechanical Dimension (mm)

*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Spectrum



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GUI

Ordering Information (Part Number) System

Prefix	Wavelength	Wavelength Spacing	Channel	Fiber Type	Fiber Cover	Fiber Length	Connector ^[1]
WDMD-	C-Band = C L-Band = L C+L-Band = P S-Band = S O-Band = O E-Band = E U-Band = U N-Band * = N	200GHz = 2 100GHz = 1 50GHz = 5 Special = 0	48 = A48 16 = A16 40 = A40 60 = A60 96 = A96 Special = 00	SMF-28 = 1 50/125 = M	0.9mm tube = 3 Special = 0	0.25m = 1 0.5m = 2 1.0 m = 3 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 Special = 0

Notes:

* 850, 880, 910, 940 nm.

[1]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.

How to test the insertion loss of a tunable optical filter

The filter only works in a specific range. Beyond this range, extra peaks may show. These peaks can be blocked with special order. Please follow these instructions to do an optical insertion loss test:

1. Connect a broadband fiber-coupled laser source to OSA, sweep one time over the specified range of the tunable filter, and then fix the curve in Trace A as a reference.
2. Connect the broadband laser source to the fiberoptic tunable filter fiber as input, then connect the other fiber port of the tunable filter as the output to the OSA.
3. Set OSA Trace B as 'write,' Trace C as 'Calculate: B-A.' Auto sweep Trace C from the specific range. Tune the micrometer to shift the peak at a different wavelength. Use 'Peak search' to record IL at a different wavelength."

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