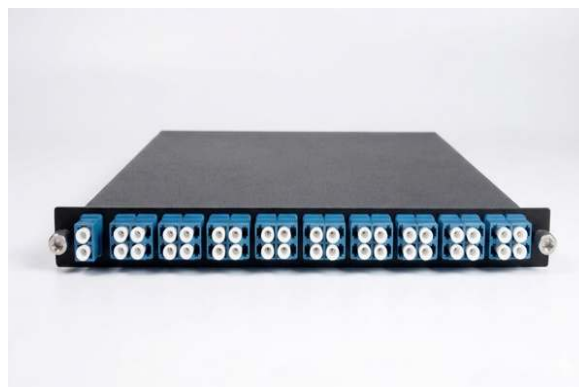


General Description

The PDR CWDM Mux/DeMux series provides coarse wavelength division multiplexing and demultiplexing across the standard CWDM wavelength grid from 1270 nm to 1610 nm, supporting 4, 8, and 16 channel configurations. Four form factors are available — ABS Compact Module (two size variants), 1U Rack Equipment, and LGX Module — to suit inline, rack-mounted, and high-density panel installations respectively. Low insertion loss, high adjacent-channel isolation exceeding 30 dB, and a return loss greater than 45 dB ensure reliable signal integrity across all channel counts and form factors. Compatible with Corning SMF-28 fiber and fully configurable with multiple pigtail diameters and connector options to meet diverse deployment requirements.



ABS Compact Module (Narrow Passband)



ABS Compact Module (Wide Passband)



1U Rack Equipment



LGX Module

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Key Features

- Four form factors: ABS Compact Module (two sizes), 1U Rack Equipment, and LGX Module
- Supports 4, 8, and 16 channel configurations across the CWDM grid from 1270 nm to 1610 nm
- Low insertion loss: ≤ 1.6 dB (4ch), ≤ 2.8 dB (8ch), ≤ 4.5 dB (16ch) for ABS Compact Module
- High adjacent channel isolation >30 dB; non-adjacent channel isolation >40 dB
- Low passband ripple ≤ 0.40 dB and polarization dependent loss < 0.30 dB across all variants
- Return loss >45 dB and directivity >50 dB for excellent signal integrity
- Maximum optical input power 500 mW; compatible with Corning SMF-28 fiber
- Operating temperature -20°C to $+70^{\circ}\text{C}$; storage -40°C to $+85^{\circ}\text{C}$
- Multiple pigtail diameter options (0.9 mm, 2.0 mm, 3.0 mm) with SC/APC, SC/UPC, LC/UPC, and LC/APC connectors
- High stability ABS construction; suitable for CATV, WDM systems, system monitoring, and test and measurement

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Technical Specifications

Parameter	Specification
CWDM Wavelength Grid	1270, 1290, 1310 ... 1570, 1590, 1610 nm (20 nm channel spacing)
Channel Configurations	4 Channel 8 Channel 16 Channel
IL — ABS Compact Module (Narrow PB)	4ch: ≤ 1.6 dB 8ch: ≤ 2.8 dB 16ch: ≤ 4.5 dB
IL — ABS Compact Module (Wide PB)	4ch: ≤ 2.0 dB 8ch: ≤ 3.6 dB 16ch: ≤ 5.0 dB
IL — 1U Rack Equipment	4ch: ≤ 1.8 dB 8ch: ≤ 3.0 dB 16ch: ≤ 4.8 dB
IL — LGX Module	4ch: ≤ 1.8 dB 8ch: ≤ 3.0 dB 16ch: ≤ 4.8 dB
Passband — ABS Compact (Narrow PB)	± 0.11 nm (@ -0.5 dB)
Passband — ABS Compact (Wide PB)	± 6.5 nm (@ -0.5 dB)
Passband — 1U Rack / LGX Module	± 7.5 nm (@ -0.5 dB)
Isolation — Adjacent Channel	> 30 dB
Isolation — Non-Adjacent Channel	> 40 dB
Passband Ripple	≤ 0.40 dB
Polarization Dependent Loss (PDL)	< 0.30 dB
Polarization Mode Dispersion (PMD)	< 0.10 ps
Return Loss	> 45 dB
Directivity	> 50 dB
Maximum Optical Power	500 mW
Operating Temperature	-20°C to $+70^{\circ}\text{C}$
Storage Temperature	-40°C to $+85^{\circ}\text{C}$
Fiber Type	Corning SMF-28
Package — ABS Compact (Narrow PB)	100 × 80 × 10 mm or 120 × 80 × 18 mm
Package — ABS Compact (Wide PB)	130 × 100 × 25 mm or 130 × 100 × 50 mm
Package — 1U Rack Equipment	1U Rack
Package — LGX Module	129 × 29 × 130 mm or 217.2 × 243 × 200.2 mm

IL = Insertion Loss | PB = Passband

Applications

- CATV and cable television headend signal multiplexing and distribution across CWDM wavelength bands
- Metro and access WDM network capacity expansion using the full 1270–1610 nm CWDM grid
- Optical network monitoring and per-wavelength channel management in carrier-grade systems
- Test and measurement equipment for wavelength-selective optical characterisation
- Data center interconnect (DCI) and enterprise CWDM backbone deployments
- Telecommunications switching and aggregation systems requiring scalable channel density

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Ordering Information

Type	Port Type	Wavelength	Pigtail Type	Fiber Type	Length	Connector
M=Mux	6=6ch	47=1470	900=900μm	1=SMF-28e		NE=None
D=Demux	12=12ch	61=1610	Loose Tube			SA=SC/APC
	18=18ch		2000=2mm			SU=SFC/UPC
			3000=3mm			LC=LC/UPC
						LA=LC/APC
						XX=Other

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