

SWDM / CWDM 850-1610nm



850-1610 nm, ITU Wavelength, SM, MM, PM

DATASHEET

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Features

- 100/200GHz ITU Channel Spacing
- Low Insertion Loss
- Wide Pass Band
- High Channel Isolation
- High Stability and Reliability
- Epoxy Free Optical Path

Applications

- Channel Add / Drop
- WDM Network
- Wavelength Routing
- Fiber Optical Amplifier
- CATV Fiberoptic System

The Coarse Wavelength Division Multiplexer (CWDM) employs thin-film coating technology and a proprietary non-flux metal-bonded micro-optics packaging design to enable optical add/drop functionality across ITU channel wavelengths from 850 to 1610 nm. It delivers low insertion loss and wide passbands at each ITU center wavelength, along with high channel isolation. The device features low temperature sensitivity and an epoxy-free optical path, ensuring high reliability and performance for polarization-maintaining systems.

Specifications

Parameter	Min	Typical	Max	Unit
Channel Number		1		
Center Wavelength	850		1619	nm
CWDM Channel Passband		-6.5		nm
Insertion Loss ^[1]		2	2.4	dB
Isolation (Adjacent Channel)			30	dB
Isolation (Non-Adjacent Channel)			40	dB
Passband Ripple			0.3	dB
Polarization Dependent Loss			0.1	dB
Polarization Mode Dispersion			0.1	ps
Maximum Optical Power			500	mW
Directivity			50	dB
Operating Temperature	-5		75	°C
Storage Temperature	-40		85	°C
Package Dimension		90 x 76 x 8		mm

Notes:

[1]. Excluding connectors

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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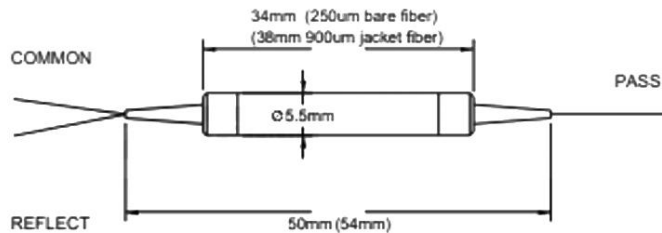


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Mechanical Dimensions (mm)

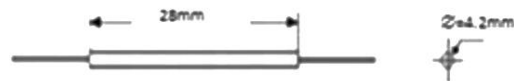
A package:



M package:



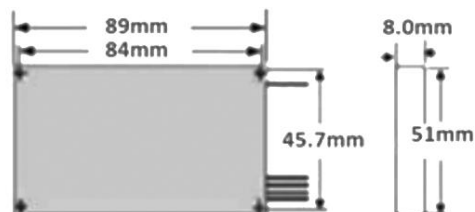
N package:



C package:



S package:



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

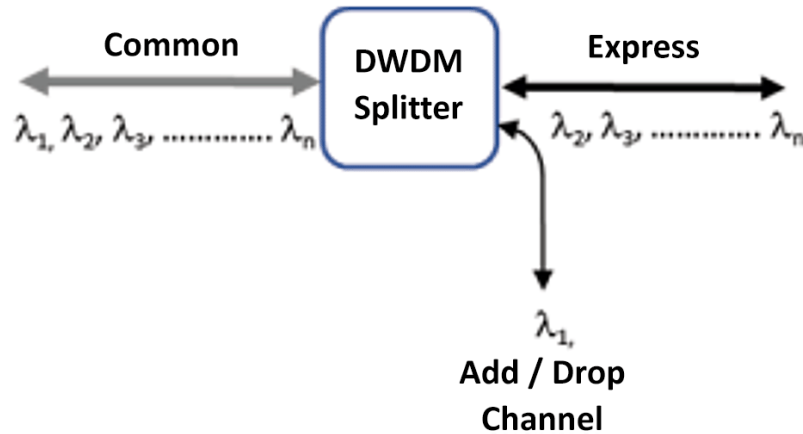
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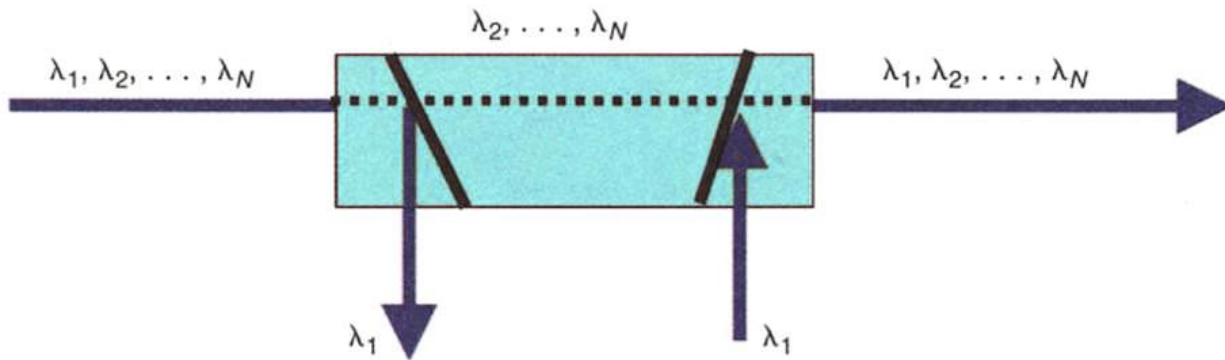
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Channel Configurations



Optical Function Path Illustration

Wavelength multiplexing and Demultiplexing can be illustrated below in a single-channel optical add-drop case.



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Ordering Information (Part Number)

Prefix	ITU Wavelength *	Channel	Package	Fiber Type	Fiber Cover	Fiber Length	Common Connector ^{[1][3]}	Pass/Reflect Connector ^{[1][3]}
CWDM-	1270 nm = 27 1290 nm = 29 1310 nm = 31 1330 nm = 33	1 = 1	A Package = A M Package = M N Package = N C Package = C S Package = S	SM28 = 1 50/125 = 2 PM1310 = 3 PM1550 = 4 F ^[2] = F	Bare fiber = 1 900 µm tube = 2 3mm jacket = 3 2mm jacket = 4 1.6mm jacket = 5	0.5m = 1 1.0m = 2	None = 0 FC/APC = 1 FC/PC = 2 SC/APC = 3 SC/PC = 4 ST = 5 LC/UPC = 6 LC/APC = 7	None = 0 FC/APC = 1 FC/PC = 2 SC/APC = 3 SC/PC = 4 ST = 5 LC/UPC = 6 LC/APC = 7

Note:

[1]. Regular fiber connector has PER ~22dB. Connector with PER >27 dB is available using special process

[2]. **F** fiber has core diameter 25 micron and NA0.09

- Select from below.

[3]. The connector cannot be installed directly onto bare fiber, as it 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 can remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SM28 fiber and decreases further with smaller core fibers.

CWDM ITU Table following standard ITU-T G.694.2 defined center wavelengths:

Channel #	Wavelength (nm)
23	850
24	880
25	910
26	940
27	1270
29	1290
31	1310
33	1330
35	1350
37	1370
39	1390
41	1410
43	1430
45	1450
47	1470
49	1490
51	1510
53	1530
55	1550
57	1570
59	1590
61	1610