

Wavelength Division Multiplexer



Thin-Film High Isolation 1310+1490/1550

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This document proposes the specification of the Thin-Film High Isolation Wavelength Division Multiplexer that transmits light at 1310 nm and 1490 nm and reflects light at 1550 nm.

1. Specifications

(All parameters are referenced without connectors. Typical connector loss 0.25 dB/pair)

Parameters		Specifications	Unit
Transmitted Band		1270-1350 and 1480-1500	nm
Reflected Band		1535-1565	nm
Passband Insertion Loss		≤ 1.0	dB
Reflected band Insertion Loss		≤ 1.2	dB
Insertion loss uniformity over Transmitted band		≤ 0.2	dB
Insertion loss uniformity over Reflected band		≤ 0.1	dB
Isolation in Transmission against Reflected band		≥ 40	dB
Isolation in Reflection against Transmitted Band		≥ 40	dB
PDL		≤ 0.1	dB
PDL over Reflected band		≤ 0.5	dB
PMD		≤ 0.1	ps
Return Loss		≥ 50	dB
Directivity		≥ 55	dB
Optical Power Handling		> 500	mW
Operating Temperature		0 to 70	°C
Storage Temperature		-40 to 85	°C
Fiber Type		Corning SMF 28	
Package Dimension (excluding strain relief)	Bare Fiber	$\phi 5.5 \times 35$ typical	mm
	900 μm Loose Tube	$\phi 5.5 \times 40$ typical	

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2. Part number of WDM

W	M	M									N			
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Product Type
 N=standard
 H=high isolation

Wavelength (Reflection/Pass)
 1315=1310/1550 nm *
 1513=1550/1310 nm
 1415=1480/1550 nm
 1534=1550/1310+1490 nm *
 3415=1310+1490/1550 nm
 9815=980/1550 nm
 8513=850/1310 nm *
 Note: only * noted has high isolation version

Fiber Type
 1 = SMF28
 5 = MM 50/125 um
 6 = MM 62.5/125 um
 7 = For WMMN9815

Package Type
 S=single tube
 N=module
 G=LGX

Fiber Length
 10=1.0 m
 15=1.5 m
 30=3.0 m

Fiber Jacket
 A=250 μm bare fiber
 B=900 μm loose tube
 E=tight buffer

Connectors
 A=FC/PC
 B=SC/SPC
 C=SC/PC
 D=ST/SPC
 E=ST/PC
 F=LC/SPC
 G=LC/PC
 H=MU/UPC
 I=MU/PC
 J=LC/APC

3. size reference

NA

4. RoHS appliance. GR-1209-Core, GR-1221-Core Generic Requirement and test standard.

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