



Single Channel CWDM Component

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This document proposes the specification of Coarse Wavelength Division Multiplexers and Demultiplexers.

Specifications

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

Parameters	Specification	Unit
Center Wavelength	1271, 1291, 1311, 1331, 1351, 1371, 1391, 1411, 1431, 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610	nm
Nominal Channel Spacing	20	nm
Channel Passband	$\lambda_c \pm 6.5\text{nm}$	nm
Passband Ripple	≤ 0.5	dB
Insertion Loss	≤ 1.0 (1-ch) ≤ 1.8 (4-ch) ≤ 2.8 (8-ch) ≤ 3.5 (16-ch)	dB
Uniformity	≤ 1.0	dB
Isolation (adjacent channel)	≥ 30	dB
Isolation (non-adjacent channel)	≥ 45	dB
Insertion Loss Temperature Sensitivity	≤ 0.008	dB/°C
Polarization Dependent Loss	≤ 0.1	dB
Polarization Mode Dispersion	≤ 0.1	ps
Return Loss (at Mux/DeMux channels)	≤ 45	dB
Directivity	≤ 55	dB
Maximum Power Handling	300	mW
Operating Temperature	-5 to 65	°C
Storage Temperature	-40 to 85	°C
Package Dimension	P0 (1-ch): $\varnothing 5.50 \times 35 / \varnothing 5.50 \times 40$ P1 (4-ch): 100 (L) x 80 (W) x 8 (H)* P2 (8/16-ch): 120 (L) x 90 (W) x 8 (H)*	mm

*LGX style enclosures also available. See Section 8 for details.

1. Part number of CWDMs

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Product Type

M=Mux
D=Demux

Channels

01=1-Channel
04=4-Channel
08=8-Channel
16=16-Channel

Fiber Jacket

A=250 μm bare fiber
B=900 μm loose tube
C=3 mm jacket
D=2 mm jacket
E=tight buffer

Fiber Length

10=1.0 m
15=1.5 m
30=3.0 m
mn=m.n meters

Connectors

0=none	A=FC/PC
2=FC/UPC	B=SC/SPC
3=FC/APC	C=SC/PC
4=SC/UPC	D=ST/SPC
5=SC/APC	E=ST/PC
6=ST/UPC	F=LC/SPC
7=LC/UPC	G=LC/PC
9=FC/SPC	H=MU/UPC
	I=MU/PC
	J=LC/APC

**Start Channel
(Short Wvl)**

E0=1271 00=1471
E1=1291 01=1491
E2=1311 02=1511
E3=1331 03=1531
E4=1351 04=1551
E5=1371 05=1571
E6=1391 06=1591
E7=1411 07=1611
E8=1431
E9=1451

**End Channel
(Long Wvl)**

E0=1271 00=1471
E1=1291 01=1491
E2=1311 02=1511
E3=1331 03=1531
E4=1351 04=1551
E5=1371 05=1571
E6=1391 06=1591
E7=1411 07=1611
E8=1431
E9=1451

Package Type

0= No SS Tube
S= Single
N= Module
G= LGX
M= Mini

2. size reference

NA

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

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