



DCM (Dispersion Compensation Module)

Part Number: F520-1U-xDCMxx-xx



Overview

Dispersion Compensation Modules (DCMs) are designed to compensate the dispersion of conventional G.652 fiber or other transmission fibers having a positive dispersion that occurs in long-haul optical transmission systems. These products offer superior polarization mode dispersion (PMD) performance and a negative dispersion slope, allowing a DWDM or long-haul system to maintain signal integrity over great distances. Low insertion loss and PMD make the product ideal for long-haul telecommunication systems as well as DWDM transport. The compact 1U size can be mounted easily on 19 and 23-inch cabinet rack.

Applications

- High speed transmission system
- Long-haul telecommunication system
- Dispersion limit extension of DWDM system

Features

- Fixed 1U Rack package
- DWDM system dispersion compensation and Broadband low residual dispersion
- G.652 fiber C-Band 100% slope compensation
- Low insertion loss
- Low polarization model dispersion
- Conform to Telcordia GR-2854-CORE standard
- Reliability tested by Telcordia GR-1221-CORE



Specification 1

Parameter	Min	Max	Unit
Operating Wavelength Range	1525	1565	nm
Brillouin Scattering Threshold	6	-	dBm
Non-linear Coefficient	-	1.4×10^{-9}	(n^2/A_{eff}) (W ⁻¹)
Effective Area (A_{eff})@1550nm	20	-	μm^2
Maximum Input Power	-	23	dBm
Operating Temperature Range	-5	70	°C
Storage Temperature Range	-40	85	°C
Relative Humidity	<85%	85	RH%
Environmental / Reliability Testing	Comply with Telcordia GR-2854 and GR-1221 standard		
Size*	483(W) x 261(D) x 44(H) mm		

Note: The Width size includes the hanging ear, the Depth size does not include adaptors on the panel.



Specification 2

Parameters / Model No.	DCM10	DCM20	DCM30	DCM40	DCM50
Compensated Distance (km)	10	20	30	40	50
1545nm Dispersion (ps/nm)	-170+/-5	-340+/-10	-500+/-15	-680+/-20	-825+/-25
1545nm Relative Dispersion Slope	0.0036 +/- 10%				
Insertion Loss (dB)	≤2.6	≤3.3	≤3.9	≤4.7	≤5.2
Insertion Loss (typ) (dB)	2.0	2.7	3.2	4.0	4.4
Polarization Mode Dispersion (ps)	≤0.5	≤0.6	≤0.7	≤0.7	≤0.8
Polarization Mode Dispersion (typ)(ps)	0.2	0.2	0.3	0.3	0.4
Polarization Dependent Loss (dB)	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1
Parameters / Model No.	DCM60	DCM70	DCM80	DCM100	DCM120
Compensated Distance (km)	60	70	80	100	120
1545nm Dispersion (ps/nm)	-1000+/-30	-1170+/-35	-1340+/-40	-1680+/-50	-2010+/-60
1545nm Relative Dispersion Slope	0.0036 +/- 10%				
Insertion Loss (dB)	≤6.4	≤6.9	≤8.0	≤9.5	≤11.0
Insertion Loss (typ) (dB)	5.4	5.7	6.7	8.0	9.3
Polarization Mode Dispersion (ps)	≤0.8	≤0.9	≤0.9	≤1.0	≤1.1
Polarization Mode Dispersion (typ)(ps)	0.4	0.5	0.5	0.6	0.7
Polarization Dependent Loss (dB)	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1



Ordering Information

F520-1U-□DCM□□-□□

DCM Counts

Blank- 1pc *Default
2- 2pcs

Compensation Distance

10: 10km	60: 60km
20: 20km	70: 70km
30: 30km	80: 80km
40: 40km	100: 100km
50: 50km	120: 120km

Connector Type

SP: SC/UPC	LP: LC/UPC
SA: SC/APC	LA: LC/APC
FP: FC/UPC	
FA: FC/ACP	