Description:

1.1 Product Function

Dispersion slope compensation module (DCM) based on dispersion slope compensating fiber in module package, special for G.652 fiber. The DCM modules are available with any dispersion values from 20km to 120km compensation distance, and can be used both for single channel and multi channels DWDM optical fiber communication systems.

1.2 Product Application

For both SDH and DWDM optical fiber communication system, and for G.652 fiber.

2.0 Optical Specification

Parameters	Unit	DCM-20	DCM-40	DCM-60	DCM-70	Notes
Compensated Distance	km	20	40	60	70	1
Dispersion@1545nm	ps/nm	-340±10	-670±20	-1000±30	-1170±35	2
RDS	1/nm	0.0036±20%				3
Max. Insertion Loss (C-Band)	dB	3.5	5.2	6.8	8	4
Typical Insertion Loss (C-Band)	dB	2.9	4.4	5.6	6.9	
WDL (C-Band)	dB	≤0.5, type 0.3				
Max. PMD	ps	0.6	0.8	1	1.1	
Typical PMD	ps	0.4	0.6	0.7	0.8	
PDL	dB	≤0.1	≤0.3	≤0.3	≤0.3	5

Parameters	Unit	DCM-80	DCM-90	DCM-100	DCM-120	Notes
Compensated Distance	km	80	90	100	120	1
Dispersion@1545nm	ps/nm	-1340±40	-1510±45	-1680±50	-2010±60	2
RDS	1/nm	0.0036±20%				3
Max. Insertion Loss (C-Band)	dB	8	9.5	9.5	11	4
Typical Insertion Loss (C-Band)	dB	6.9	8.1	8.1	9.3	
WDL (C-Band)	dB	≤0.5, type 0.3				
Max. PMD	ps	1.1	1.2	1.2	1.2	
Typical PMD	ps	0.8	0.9	0.9	0.9	
PDL	dB	≤0.3	≤0.3	≤0.3	≤0.3	5

Notes:

1. The compensated distance is estimated based on G.652 fiber.
2. This dispersion coefficient is the value of 1545nm wavelength on G.652 fiber.
3. Relative Dispersion Slope is defined as the ratio of dispersion slope to dispersion, RDS=Slope/Dispersion.
4. IL include fiber loss, splice loss and connector – connector interface loss.
5. Polarization dependent loss is the loss deviation induced by two polarization mode.
6. Compensated distance could be customized.
7. Parameter is test at 25 deg.
8. 100% slope compensation of G.652 fiber in C-Band.

2.2 Nonlinear Properties

Parameters	Unit	Min	Max	Notes
SBS Threshold	dBm	4	-	
Nonlinear Coefficient	W $^{-1}$	-	1.4×10^{-9}	
Effective Area	µm²	20	-	

3. Operation/Storage Temperature/Humidity

No	Parameter	Specification	Units	Notes
3.1	Operation Temperature	-5 - +70	°C	
3.2	Operation Humidity	85	%RH	
3.3	Storage Temperature	-40 - +85	°C	
3.4	Storage Humidity	90	%RH	

4. Optic Ports Definition

No	Port	Definition of Port	Connector Type	Notes
4.1	1	In	LC/UPC	Or Customized
4.2	2	Out	LC/UPC	Or Customized

5. Pigtail and Connector

No	Parameter	Specification	Unit	Notes
6.1	Pigtail Type (All Ports)	Φ2	mm	Or Customized
6.2	Pigtail Length (All Ports)	0.9±0.1	m	Or Customized
6.3	Connector Type (All Ports)	LC/UPC		Or Customized