Data sheet

CTX Series

CDC652-xxx-LPC

Dispersion Compensation Fiber, 1U Chassis

Main Features

- Dispersion compensation fiber for compensating chromatic dispersion in high speed network
- C-BAND, L-BAND
- Fully Passive, no Power Supply or Cooling
- High Negative Dispersion per Unit Length (fiber specific)
- Required Dispersion Slope (corresponding to fiber in link)
- Low Insertion Loss

Figure 1: MDX chassis

Benefits

- Compact 1U chassis, cost-effective
- It's simple to install, requires no configuration or maintenance,

Description

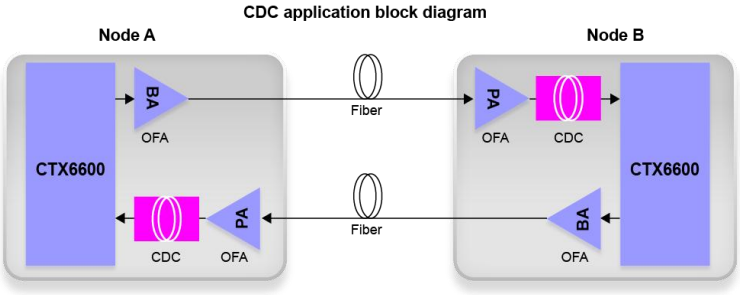
CDC Chromatic Dispersion compensation fiber in 1U 19''chassis. The dispersion compensation module DCM can compensate the dispersion and dispersion slope of standard single-mode fiber (G.652) in C-band, so as to optimize the residual dispersion of the system.

The module is based on mature and reliable optical fiber technology, which can improve the performance of optical transmission system.

The dispersion value range of the dispersion compensation module at 1550nm wavelength can reach -10 to -2100ps/ nm. It can also provide modules with special requirements for central wavelength and dispersion. Typical application diagram below:

Applications

- Chromatic Dispersion compensation for extension-reach
- DWDM, SDH/SONET long haul, Metro, submarine network
- 10G/25G/50G etc. application



Technical Specifications

Parameter	Dispersion[1]							IL	IL Excursion Temp	WDL [2]	PDL	PMD [3]
	1525	1525	1545	1545	1565	1565	1545					
	Min	Max	Min	Max	Min	Max	Target	Max	Max Excursion	Max	Max	Max
km	ps/nm	ps/nm	ps/nm	ps/nm	ps/nm	ps/nm	ps/nm	dB	dB	dB	dB	ps
10	-159	-145	-170	-158	-184	-168	-164	2.1	0.5	0.5	0.1	0.3
20	-315	-293	-337	-319	-364	-340	-328	2.7	0.5	0.5	0.1	0.4
40	-629	-588	-673	-640	-727	-682	-656	4.1	0.5	0.5	0.1	0.5
60	-942	-883	-1009	-960	-1090	-1024	-985	5.5	0.5	0.5	0.1	0.6
80	-1251	-1183	-1340	-1286	-1448	-1371	-1313	6.9	0.5	0.6	0.1	0.7
100	-1560	-1482	-1671	-1611	-1805	-1718	-1641	8.4	0.5	0.6	0.1	0.8

Dispersion Technology	Fiber Dispersion Compensation
Nonlinearity Specifications	
SBS Threshold up to DCM 80 (dBm)	> 4
SBS Threshold >DCM 80 (dBm)	> 3
Nonlinearity Coeff – n_2/A_{eff} [1] (1/W)	< 1.85 x 10^{-9}
A_{eff} at 1550nm (um^2) typical	19
Operating Range	
Operating Wavelength (nm) C-band	1525-1565
Total Optical Input Power(dBm)	<23
Physical feature	
Dimensions(HxWxD mm)	44x440 x240
Weight (kg)	3.6
Package options	1RU 19'' chassis,
Platform	CTX Series
Connector Type	LC/UPC
Environment	
Operating Temperature	-5°C to 70°C
Storage	-40 to 75°C
Humidity	5% ~ 85% RH non-condensing
Power Supply	
Power Input	Passive chassis, no power supply needed
Compliance	
Standards	ISO,ITU-T G.694.1, RoHS,Telcordia GR-1221-CORE,Bellcore standard GR-2854 and GR-63

NOTES:

1) a. Dispersion at 1545nm and dispersion slope used, as references for standard single-mode fiber were 16.4 ps/nm /km and 0.060 ps/nm^{2}km, respectivel； b. Dispersion Slope Compensation Ratio = 90 to 110% at 1545 nm.

2) WDL = IL variation over wavelength at room temperature, maximum IL – minimum IL over the operating wavelength

3) PMD = Linear mean DGD over wavelength range 1510 – 1570 nm, 1 nm step, using the Jones Matrix method at room temperature.

4) Return Loss: Connector return loss < -45 dB. Module return loss including Rayleigh Back Scattering < - 27 dB

5) Unless otherwise noted all specifications are met over temperature, wavelength, and polarization. Insertion loss includes one pair of mated connectors.

6) DC Modules shall withstand an optical input power level of 23 dBm for 10 seconds without sustaining any irreversible

Order Information

Part Number	Description	Note
CDC652-XXX-LPC	Dispersion Compensation fiber, G.652, C-BAND, xxx: length，LC/UPC Connector, 1RU 19’’ chassis	
CDC655-XXX-LPC	Dispersion Compensation fiber, G.655, C-BAND, xxx: length，LC/UPC Connector, 1RU 19’’ chassis	On Request