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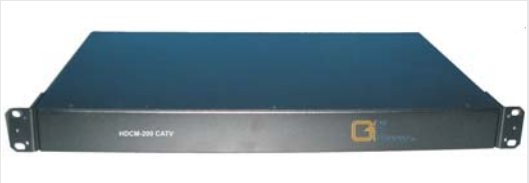
High-Performance OT-DCM-xxx Dispersion Compensation Module

Features / Benefits



APPLICATIONS

- Increase Distance and Decrease BER of Digital Fiber Optic Links
- Reduce Distortion in Analog Fiber Optic Links
- Cancel Out Dispersion Caused by Standard SMF-28 Fiber

FEATURES

- Can be Selected for a Wide Range of Distances
- Wide Optical Bandwidth
- Fiber-based dispersion compensation eliminates the Need for Precisely Tuned Channel Wavelengths
- Works with Both Analog and Digital Signal Formats
- Works with single wavelength or DWDM systems with multiple optical signals.

Overview

The high-performance OT-DCM-xxx Fiber-Based, Dispersion Compensation Module cancels out distortion from optical signals that have traveled long distances over standard SMF-28 fiber with positive dispersion. In digital systems, this dispersion limits the maximum transmission distance at a given data rate and causes increased BER. In analog systems, this dispersion manifests itself primarily as second order distortion in the received signal. The OT-DCM-xxx Dispersion Compensation Module cancels out the fiber's positive dispersion, increasing transmission distance and enhancing the fidelity of all types of optical signals.

Operating Specifications

Parameter	Units	Specification
Operating Wavelength	nm	C-Band: 1525-1565
Operating Temperature	°C	-35 to +70
Storage Temperature	°C	-40 to +75
Relative Humidity	%	<95
Connector Return Loss	dB	<-60
Module Return Loss	dB	<-60
Optical Connector		SC/APC or FC/APC
Package Dimensions	in.	19" 1U Rack

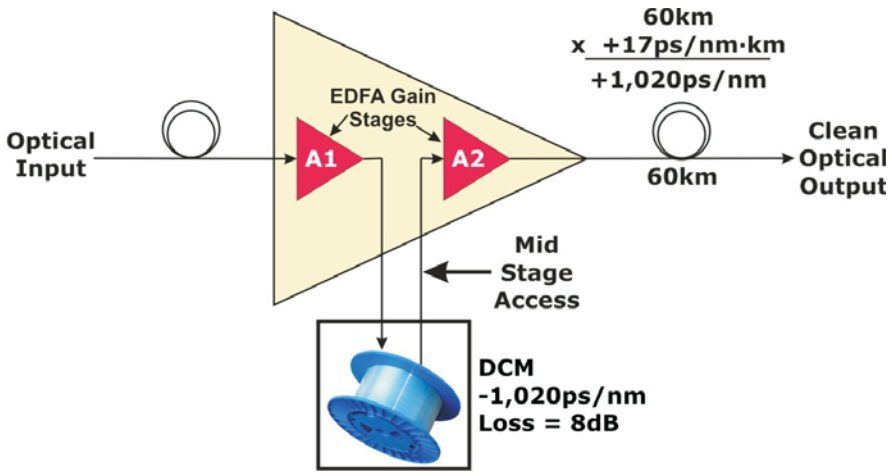


Figure 1 - Typical DCM Application

Optical Performance	Dispersion[1]						IL[2]	WDL[3]	PDL[4]	PMD[5]
	1525nm	1525nm	1545nm	1545nm	1565nm	1565nm				
	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Max.	Max.	Max.
	ps/nm	ps/nm	ps/nm	ps/nm	ps/nm	ps/nm	dB	dB	dB	ps
OT-DCM-20	-315	-293	-337	-319	-364	-340	3.3	0.5	0.1	0.4
OT-DCM-40	-629	-588	-673	-640	-727	-682	4.7	0.5	0.1	0.5
OT-DCM-60	-942	-883	-1009	-960	-1090	-1024	6.4	0.6	0.1	0.6
OT-DCM-80	-1251	-1183	-1340	-1286	-1448	-1371	8.0	0.7	0.1	0.7
OT-DCM-100	-1563	-1478	-1675	-1608	-1810	-1713	9.6	0.7	0.1	0.8

Notes:
1. Each DCM module is designed to compensate for a specific amount of standard fiber dispersion. For example, the OT-DCM-20 is designed to compensate for 20 km of G.652 fiber dispersion
2. Insertion Loss - Includes fiber loss, splice loss, and connector loss.
3. Wavelength Dependent Loss (WDL)
4. Polarization Dependent Loss (PDL)
5. Polarization Mode Dispersion (PMD)

Ordering Information

OT-DCM — [ ] — [ ]

Compensation Distance
20 - 20 km
40 - 40 km
60 - 60 km
80 - 80 km
100 - 100 km
Other - Contact Factory

Connector
FA = FC/APC
SA = SC/APC