

Model OT-DCM-F 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
- No Need for Precisely Tuned Channel Wavelengths
- Works with Both Analog and Digital Signal Formats

Overview

The OT-DCM-F Series Fiber-Based Dispersion Compensation Module removes distortion from optical signals that have traveled long distances over standard, positive dispersion, SMF-28 fiber. 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 as second order distortion in the signal. The OT-DCM-F 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 ¹	%	<90
Connector Return Loss	dB	<-55
Module Return Loss	dB	<-55
Optical Connector		SC/APC or FC/APC
Package Dimensions	in.	19" W x 1.72" H x 11.81" D
	mm	482.5 W x 43.6 H x 300 D

Notes: 1) Non-condensing environment only

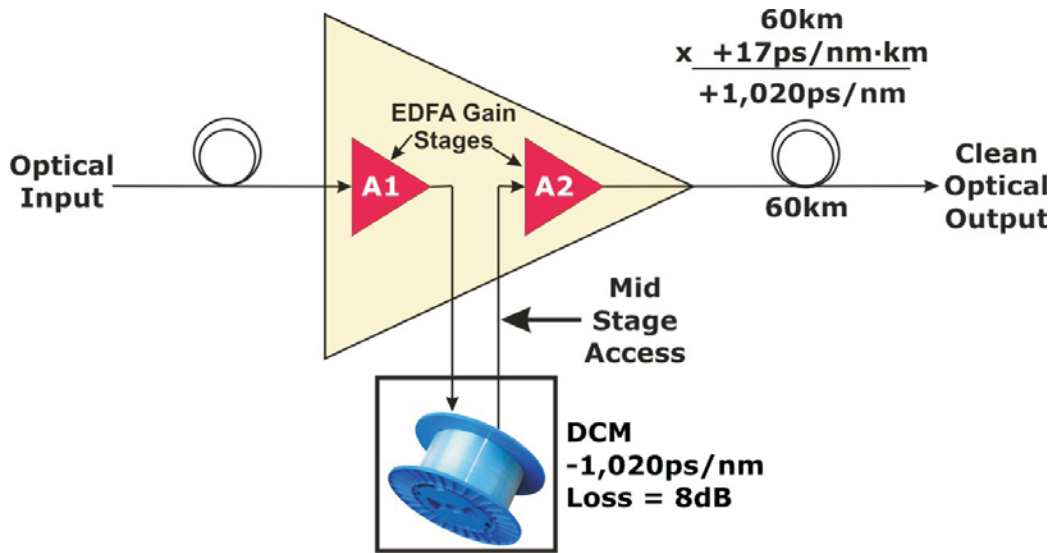


Figure 1 - Typical DCM Application

Part Numbers and Optical Dispersion Performance

Model	SMF-28 Fiber Compensation Distance (km)	Dispersion, Typical Value (ps/nm)	Polarization Dispersion (dB)	Typical Insertion Loss (dB)
OT-DCM-F10	10	-170	1.2	1.8
OT-DCM-F20	20	-340	1.5	3.6
OT-DCM-F30	30	-510	1.9	4.3
OT-DCM-F40	40	-680	2.2	5.0
OT-DCM-F50	50	-850	2.4	6.0
OT-DCM-F60	60	-1020	2.6	7.0
OT-DCM-F70	70	-1190	2.8	7.7
OT-DCM-F80	80	-1360	3.0	8.5
OT-DCM-F90	90	-1510	3.2	9.2
OT-DCM-F100	100	-1700	3.4	10.0

Note: Each DCM module is designed to compensate for a specific amount of dispersion. For example, the OT-DCM-F10 is designed to compensate for 10 km of G.652 fiber dispersion, and the OT-DCM-F100 is designed to compensate for 100 km of G.652 fiber dispersion. The units can be ordered in 10km increments.