



DCM Series

Dispersion Compensation Modules

Optelion Dispersion Compensation Modules (DCMs) enable extended reach of DWDM services. They exhibit low insertion loss, exceptional linearity and ultra-low latency. They are compatible with next-generation coherent technology, making them an ideal solution for networks that need to support both 10G and 100G+ wavelengths on a common transport infrastructure. They are purely passive devices, and are available in a compact, half-height DMS form factor.



Features

- Low insertion loss
- Negligible latency (<50 ns)
- High optical power handling with exceptional linearity
- Compatible with coherent technology
- Requires no power to operate
- Extended temperature range
- Compact DMS form factor
- Supports 100 GHz and 50 GHz ITU grid
- Single module provides dispersion compensation for entire DWDM signal
- Slope matched to G.652 fiber

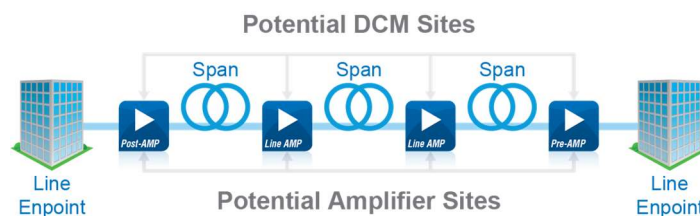
Compliance

- GR-63-CORE
- GR-3108-CORE
- RoHS

Overview

DCM modules are used in optically-amplified networks to allow for all-optical transmission over distances up to 1000 km or more. Although not required for networks that support coherent transceivers only, they are an ideal solution for networks that also need to support 10G wavelengths, including the use of commoditized DWDM SFP+ or XFP transceivers.

DCM modules are purely passive devices that are typically placed at line amplifier, ROADM, OADM or terminal locations. Their high optical power handling capability allows them to be placed in any part of the network, including at the output of a post amplifier.



Unlike legacy dispersion compensating fiber (DCF) solutions, Optelian DCM modules use periodic Fiber Bragg Grating (FBG) technology, which has very low insertion loss, high optical power handling, and adds negligible latency to the network.

Specifications

Parameter	Value	Parameter	Value
Module Type	DMS	Insertion Loss	3.0 dB maximum
Size (H x W x D)	1.5 x 10.7 x 16.5 cm (0.6 x 4.2 x 6.5 in.)	Compensated Fiber	G.652, G.655
Optical Connectors	2 LC/UPC	Maximum Input Power	27 dBm
Compensation Length	20, 40, 60, 80, 100 km (12, 25, 37, 50, 62 mi.)	Latency	<50 ns
Channel Spacing	100 GHz (C Series) 50 GHz (E Series)	Operating Temperature	-40°C to 70°C (-40°F to 158°F)
Wavelength Range	1527 to 1567 nm	Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Channel Bandwidth	>60 GHz (C Series) >25 GHz (E Series)	Certifications	GR-63/3108-CORE, RoHS

Ordering Information

Model Number	Part Number	Description
DCM-D-C20	1029-0100	40 CH FBG DCM, 20 KM, DMS 1/2-WIDE PASSIVE MODULE
DCM-D-C40	1029-0200	40 CH FBG DCM, 40 KM, DMS 1/2-WIDE PASSIVE MODULE
DCM-D-C60	1029-0300	40 CH FBG DCM, 60 KM, DMS 1/2-WIDE PASSIVE MODULE
DCM-D-C80	1029-0400	40 CH FBG DCM, 80 KM, DMS 1/2-WIDE PASSIVE MODULE
DCM-D-C100	1029-0500	40 CH FBG DCM, 100 KM, DMS 1/2-WIDE PASSIVE MODULE
DCM-D-E20	1029-0600	80 CH FBG DCM, 20 KM, DMS 1/2-WIDE PASSIVE MODULE
DCM-D-E40	1029-0700	80 CH FBG DCM, 40 KM, DMS 1/2-WIDE PASSIVE MODULE
DCM-D-E60	1029-0800	80 CH FBG DCM, 60 KM, DMS 1/2-WIDE PASSIVE MODULE
DCM-D-E80	1029-0900	80 CH FBG DCM, 80 KM, DMS 1/2-WIDE PASSIVE MODULE
DCM-D-E100	1029-1000	80 CH FBG DCM, 100 KM, DMS 1/2-WIDE PASSIVE MODULE

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