

DCMs

Dispersion Compensation Modules

The Optelian Dispersion Compensation Module (DCM) cards enable extended reach of DWDM services. They exhibit low insertion loss, exceptional linearity and low-latency operation.

Features

- Provides optimized passive dispersion compensation
- Low insertion loss (max 3.0dB)
- Proven Fiber Bragg Grating
- Quick and easy installation in Optelian mounting solutions
- Supports 40 DWDM wavelengths in the full C-band
- Slope matched to SMF-28
- Exceptional linearity

Applications

- Pre-, Post- or in-line bulk compensation
- Dispersion limit extension of DWDM system

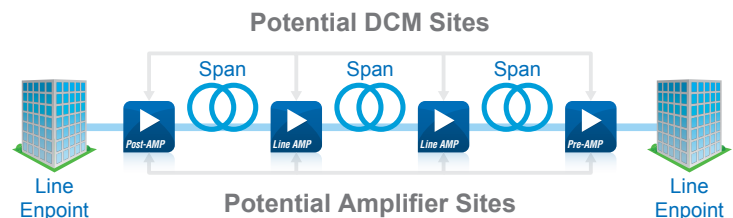
Designed in accordance with

- GR-63-CORE
- GR-1089-CORE
- GR-1221-CORE
- NEBS
- FCC Class B

The DCM-C20, C40, C60, C80 and C100 cards are passive dispersion management elements that can be inserted into an optical fiber network to control the overall chromatic dispersion.

The DCM suite complements Optelian's 40-Channel DWDM system by providing dispersion compensation for reach extension beyond 100 km.

The low insertion loss and exceptional linearity of the DCM products make them suitable for mid stage or terminal stage applications.



The module mounts in any of the active Optelian shelves and can provide card identification information for network management.

Specifications

Parameter	DCM-C20	DCM-C40	DCM-C60	DCM-C80	DCM-C100
Dispersion level @ first channel	-310 ps/nm	-619 ps/nm	-929 ps/nm	-1238 ps/nm	-1548 ps/nm
Dispersion level @ last channel	-358 ps/nm	-712 ps/nm	-1068 ps/nm	-1423 ps/nm	-1779 ps/nm
Group delay ripple	<15 ps	<15 ps	<15 ps	<15 ps	<20 ps
Polarization mode dispersion	<0.7 ps	<0.7 ps	<1.0 ps	<1.2 ps	<1.5 ps
Common parameters		Value			
Operating wavelength	1527 to 1567 nm				
Channel spacing	100 GHz				
Operating bandwidth (ITU)	±17.5 GHz				
Insertion loss	<3.0 dB				
Insertion loss ripple	<0.7 dB				
Insertion loss uniformity	<0.6 dB				
Polarization dependent loss	<0.3 dB				
Return loss	>40 dB				
Dispersion tolerance	<5%				
Operating temperature	-5°C to 65°C (23°F to 150°F)				
Relative humidity (non-condensing)	5% to 95%				
Power dissipation	2W (maximum)				
Dimensions (H x W x D)	17.5 cm x 3.0 cm x 23.4 cm (6.9 in. x 1.2 in. x 9.2 in.)				
Optical connectors	LC/PC				

Ordering information

Model number	Part number	Description
DCM-C20	1004-3040	Multi-channel FBG dispersion compensation module, 20 km
DCM-C40	1004-3050	Multi-channel FBG dispersion compensation module, 40 km
DCM-C60	1004-3060	Multi-channel FBG dispersion compensation module, 60 km
DCM-C80	1004-3070	Multi-channel FBG dispersion compensation module, 80 km
DCM-C100	1004-3080	Multi-channel FBG dispersion compensation module, 100 km

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