Cisco GS7000 Dispersion Compensation Module

In digital transport systems, dispersion is a fiber property that causes light pulses to spread. Dispersion limits both the link's bit-rate and the maximum transmission distance that can be achieved through fiber. The Cisco GS7000 Dispersion Compensation Module (DCM) contains custom-designed passive fiber optics designed to reverse the effects of dispersion in order to correct the transmitted pulse shape.

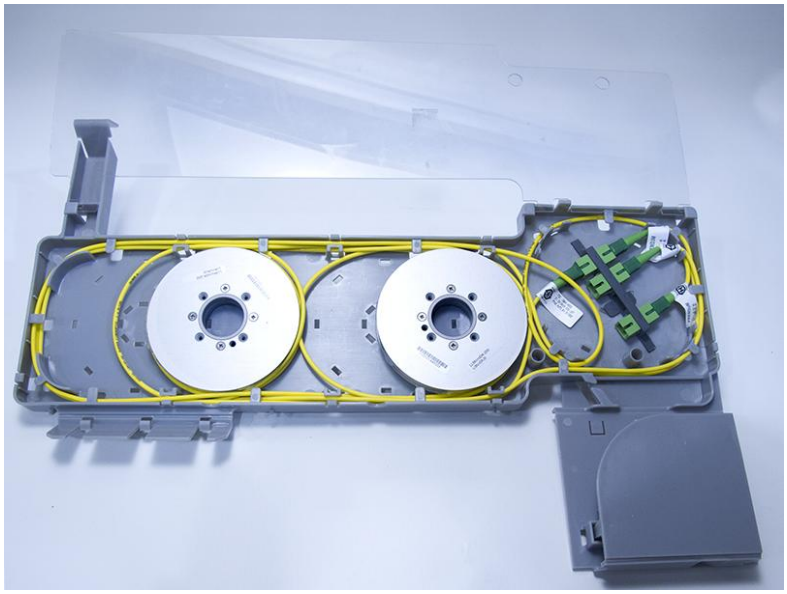
An analogous effect occurs in analog transport systems. Here, dispersion also limits the maximum transmission distance by increasing the magnitude of second order impairments (CSO) to the signal. The Cisco DCMs are designed to reverse the effects of dispersion, reduce the magnitude of the CSO impairment, and restore the ability to transmit over greater distances.

The Cisco GS7000 DCMs are designed to fit into the GS7000 extended fiber tray and are available in a variety of set-ups to accommodate different system needs.

Features

- Provides optimized dispersion compensation across the 1530 nm to 1565 nm wavelength range
- Designed for Analog and Digital transport systems including DWDM, long-haul, and high bit-rate applications
- Fully passive
- SC/APC connectors
- With GS7000 extended fiber tray mounted
- With Telcordia GR-2854-CORE Compliant Dispersion Compensation Fiber

Figure 1. Cisco Dispersion Compensation Module



Product Specifications

See the tables below for product specifications.

Table 1. Optical Specifications

Module Type	Dispersion[1] @ 1550 nm [ps/nm]	Max. loss[2] @1550 nm [dB]	RDS[3] [nm^-1]	Max. PMD[4] [ps]
DCM 10	-170 ± 2%	2.0	0.0035 ± 20%	0.2
DCM 20	-340 ± 2%	2.5	0.0035 ± 20%	0.3
DCM 30	-510 ± 2%	4.5	0.0035 ± 20%	0.4
DCM 40	-680 ± 2%	5.0	0.0035 ± 20%	0.5

Notes:

1. Each DCM is designed to compensate for a specific amount of dispersion. For example, the DCM 20 is designed to compensate for 20 km of dispersion, and the DCM 30 is designed to compensate for 30 km of dispersion.
2. Inclusive fiber loss, splice loss and one connector-connector interface loss.
3. RDS = Relative Dispersion Slope, dispersion slope divided by dispersion.
4. Average Polarization Mode Dispersion (PMD) measured using the interferometric method.

Table 2. Mechanical Specifications

Description	Value
Spool Diameter	3.90 inch 9.9 cm
Spool Height	0.55 inch 1.4 cm
Weight	1.15 lbs 521.6 g

Ordering Information

See the table below for ordering information.

Table 3. Ordering Information

Description	Part Number
Kit of GS7000 Extended Fiber (EF) Tray with 10 Km DCM	4040556
Kit of GS7000 Extended Fiber (EF) Tray with 20 Km DCM	4040557
Kit of GS7000 Extended Fiber (EF) Tray with 30 Km DCM	4040558
Kit of GS7000 Extended Fiber (EF) Tray with 40 Km DCM	4040559

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