

Datasheet

Chromatic Dispersion Compensation Modules

EM316DCMxxx



Overview

The EM316DCM Dispersion Compensation Modules are part of the Fiber Driver® DWDM solution. They are one-slot modules accommodated by any Fiber Driver chassis slots. These modules may be operated as passive units in an un-powered chassis or as managed modules with an EM316LNxNM-OT Network Manager (NM) in a powered chassis system.

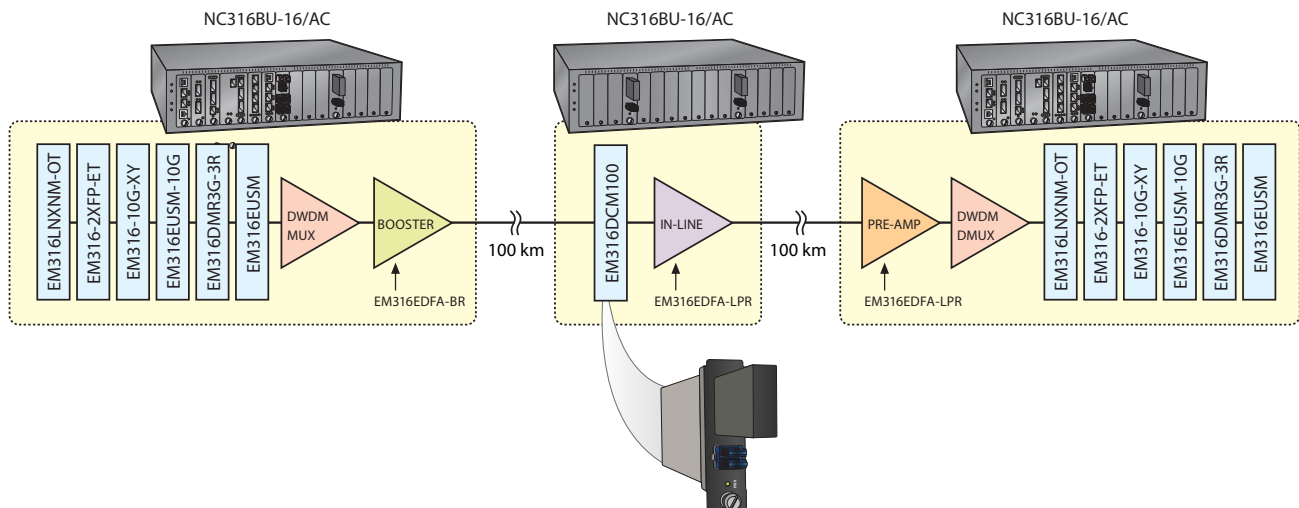
DCM modules provide fixed chromatic dispersion compensation for high-speed metro core, regional, and extended-haul DWDM networks. Chromatic dispersion is a major distance limiting factor in DWDM networks for protocols exceeding 2 Gbps including 2 and 4 Gbps Fibre Channel, 2.5 and 2.7 Gbps SONET/SDH OC-48/STM16 with or without FEC, and especially networks running 10 Gbps.

The DCMs offer a high dispersion compensation level and a very low insertion loss penalty. They provide negative dispersion compensation over the full C-Band with possible distance extensions of up to 200 kilometers.

Contact your nearest authorized MRV Communications representative or visit <http://www.mrv.com> on the web for additional information including pricing and availability.

Highlights

- Dispersion compensation in high-speed extended-haul DWDM networks
- In-line dispersion compensation at network mid-points
- Post-dispersion and pre-dispersion compensation
- Powered or passive operation
- Full C-Band coverage (DWDM Channels 21-60)
- Low insertion loss under 3.5 dB (except DCM010)
- Chromatic dispersion compensation up to 200 km
- Slope-matched SMF28/G.652 fiber
- Increased OSNR and system margins
- Economic solution ideal for single stage amplification
- Cascading support
- One-slot Fiber Driver module fits into any Fiber Driver chassis



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Physical Specifications

| | |
|---|---|
| Operating Temperature Range | 0°C to 50°C (32°F to 122°F) |
| Storage Temperature | -40°C to 85°C (-40°F to 185°F) |
| Relative Humidity | 85% maximum, non-condensing |
| Approximate Dimensions (H x W x D) | 90 mm x 25 mm x 240 mm (within chassis) 34 mm x 13 mm x 100 mm (extending from front panel) |
| Approximate Weight | 400 g (14.1 oz) |
| Regulatory Compliance | RoHS Directive; China RoHS; REACH Directive; WEEE Directive; The Quality Management System is certified to ISO 9001 by QMI-SAI Global The Environmental Management System is in compliance with ISO 14001 |

| Optical Parameters | DCM010 | DCM020 | DCM030 | DCM040 | DCM050 | DCM060 | DCM080 | DCM100 | DCM120 | DCM200 |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Compensated Distance (km) | 10 | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120 | 200 |
| Dispersion First Channel (ps/nm) | -156 | -310 | -464 | -619 | -773 | -929 | -1238 | -1548 | -1872 | -3120 |
| Dispersion Last Channel (ps/nm) | -179 | -356 | -534 | -712 | -890 | -1067 | -1423 | -1779 | -2148 | -3580 |
| Dispersion Tolerance (%) | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Maximum Input power (dBm) | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| Inter-Channel IL Uniformity (dB) | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| Maximum Insertion Loss (dB) | 4.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Minimum Return Loss (dB) | < 40 | < 40 | < 40 | < 40 | < 40 | < 40 | < 40 | < 40 | < 40 | < 40 |

Ordering Information

| Model | Function | Connectors Port/Link | Wavelength (nm) Port / Link | Range (km) |
|--------------------|---|----------------------|-----------------------------|------------|
| EM316DCM010 | SMF28 slope matched multi-channel C-Band Chromatic DCM Dispersion Compensation Module | LC / LC | C-Band | 10 |
| EM316DCM020 | SMF28 slope matched multi-channel C-Band Chromatic DCM Dispersion Compensation Module | LC / LC | C-Band | 20 |
| EM316DCM030 | SMF28 slope matched multi-channel C-Band Chromatic DCM Dispersion Compensation Module | LC / LC | C-Band | 30 |
| EM316DCM040 | SMF28 slope matched multi-channel C-Band Chromatic DCM Dispersion Compensation Module | LC / LC | C-Band | 40 |
| EM316DCM050 | SMF28 slope matched multi-channel C-Band Chromatic DCM Dispersion Compensation Module | LC / LC | C-Band | 50 |
| EM316DCM060 | SMF28 slope matched multi-channel C-Band Chromatic DCM Dispersion Compensation Module | LC / LC | C-Band | 60 |
| EM316DCM080 | SMF28 slope matched multi-channel C-Band Chromatic DCM Dispersion Compensation Module | LC / LC | C-Band | 80 |
| EM316DCM100 | SMF28 slope matched multi-channel C-Band Chromatic DCM Dispersion Compensation Module | LC / LC | C-Band | 100 |
| EM316DCM120 | SMF28 slope matched multi-channel C-Band Chromatic DCM Dispersion Compensation Module | LC / LC | C-Band | 120 |
| EM316DCM200 | SMF28 slope matched multi-channel C-Band Chromatic DCM Dispersion Compensation Module | LC / LC | C-Band | 200 |

MRV has more than 50 offices throughout the world. Addresses, phone numbers and fax numbers are listed at www.mrv.com. Please e-mail us at info@mrv.com or call us for assistance.

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