

**Datasheet**

## Chromatic Dispersion Compensation Modules

EM316DCM



### Overview

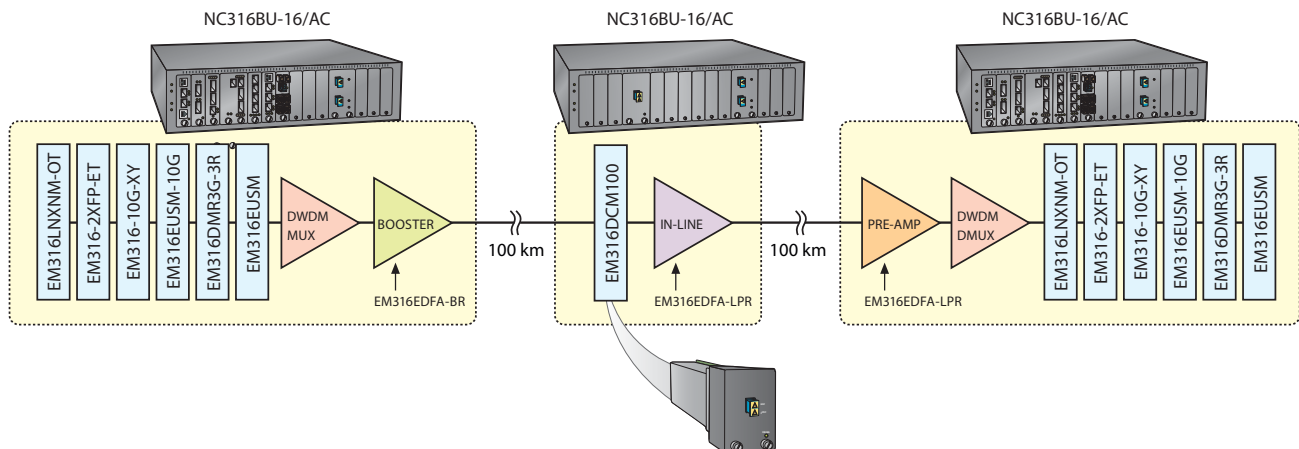
The EM316DCM Dispersion Compensation Modules are part of the Fiber Driver® DWDM solution. They are two-slot modules accommodated by two adjacent Fiber Driver chassis slots. These modules may be operated as passive units in an un-powered chassis or as managed modules with an EM316LNxNM-OT Network Manager (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 100 kilometers.

### Features

- 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 DCM10)
- Chromatic dispersion compensation up to 100 km
- Slope-matched SMF28/G.652 fiber
- Increased OSNR and system margins
- Economic solution ideal for single stage amplification
- Cascading support
- Two-slot Fiber Driver module fits two adjacent Fiber Driver chassis slots





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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	50 mm x 90 mm x 240 mm deep (2" x 3.5" x 9.5" deep)
Approximate Weight	544 g (19.2 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
Compensated Distance (km)	10	20	30	40	50	60	80	100
Dispersion First Channel (ps/nm)	-156	-310	-464	-619	-773	-929	-1238	-1548
Dispersion Last Channel (ps/nm)	-179	-356	-534	-712	-890	-1067	-1423	-1779
Dispersion Tolerance (%)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Maximum Input power (dBm)	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
Maximum Insertion Loss (dB)	4.5	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

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

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

MRV has more than 50 offices throughout the world. Addresses, phone numbers and fax numbers are listed at [www.mrv.com](http://www.mrv.com). Please e-mail us at [sales@mrv.com](mailto:sales@mrv.com) or call us for assistance.

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