

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.

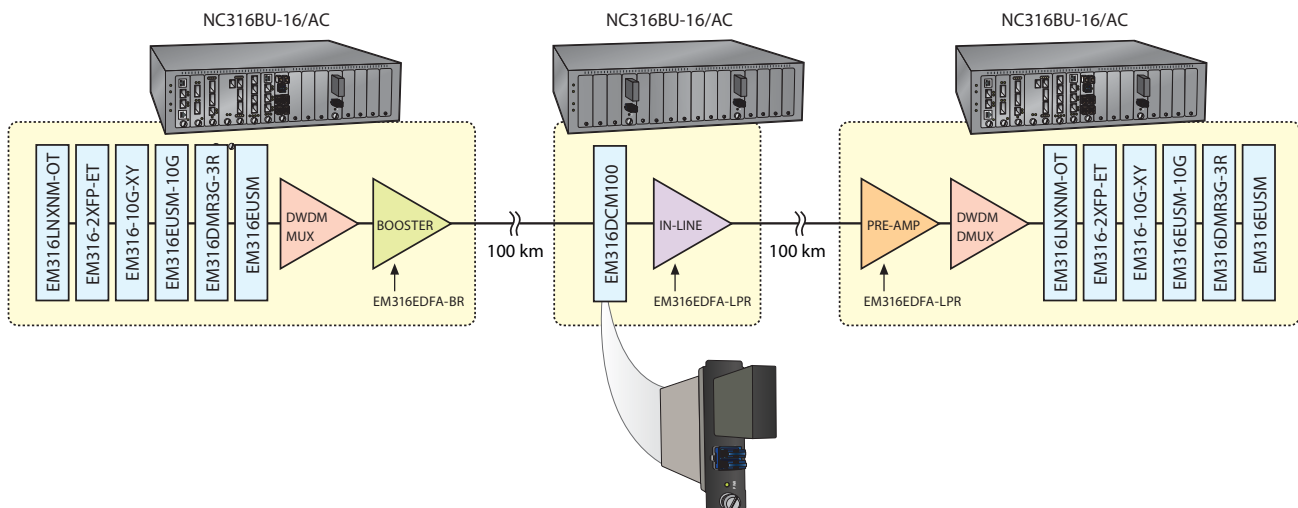
DCM modules provide fixed chromatic dispersion compensation for high-speed metro core, regional, and extended-haul DWDM networks. Chromatic dispersion is a major distance limiting factor in DWDM networks for protocols exceeding 2 Gbps including 2 and 4 Gbps Fibre Channel, 2.5 and 2.7 Gbps SONET/SDH OC-48/STM16 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 DCM100)
- 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.

MRV Los Angeles
20415 Nordhoff Street
Chatsworth, CA 91311
800-338-5316
818-773-0900

MRV Boston
300 Apollo Drive
Chelmsford, MA 01824
800-338-5316
978-674-6800

MRV International
Business Park Moerfelden
Waldeckerstrasse 13
64546 Moerfelden-Walldorf
Germany
Tel. (49) 6105/2070
Fax (49) 6105/207-100

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