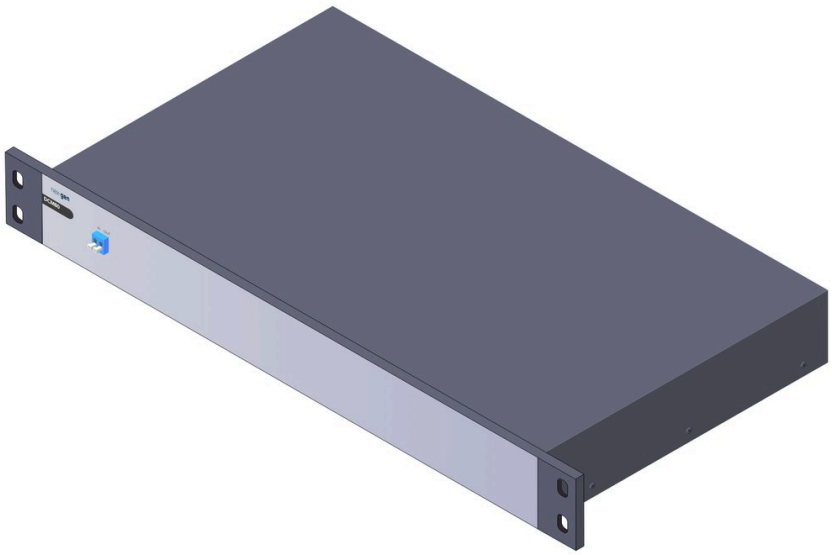
nex·gen

OTN SYSTEMS WDM PLATFORMS

Fixed Dispersion Compensation Module

The DCM is a pure passive optical device delivering fixed, wide-band chromatic dispersion slope compensation for standard G.652 single-mode fibre across the full C-band. It repairs signals deformed by accumulated dispersion in high-speed, long-haul and metro DWDM links, restoring transmission performance without adding power consumption or altering the optical signal. Eleven fixed compensation distances are available, from 15km to 120km of equivalent G.652 fibre length, and custom center wavelength or dispersion values can be supplied on request. Available as a self-contained 1U rackmount shelf (any compensation distance) or, for distances up to 60km, as an LGX module occupying 2 slots of a 1U LGX rack (two modules per rack).



HIGHLIGHTS

Full C-band slope compensation

100% G.652 fibre slope compensation (standard value) across the C-band.

Eleven fixed compensation distances

From 15km to 120km of equivalent G.652 length, up to −2040ps/nm.

Low insertion loss & PMD

Engineered for minimal insertion loss and polarisation mode dispersion at every

Fully passive & transparent

No power consumption, no electronics, transparent to the transmitted optical signal.

compensation distance.

1U rackmount or 2-slot LGX module

Self-contained 1U shelf for any compensation distance, or an LGX module occupying 2 slots of a 1U LGX rack (two modules per rack) on distances up to 60km.

Custom on request

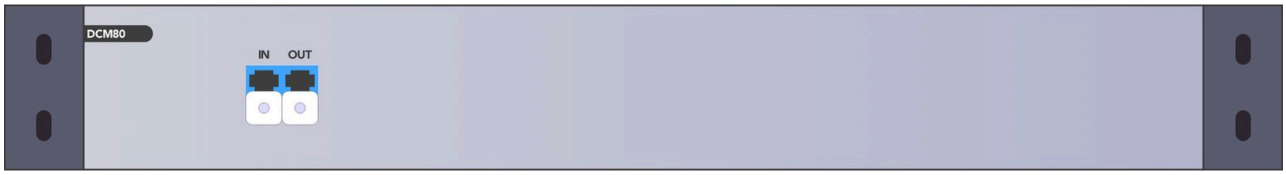
Custom compensation distances, center wavelength, packages and interface types can be supplied to order.

FORMAT

LGX 2 SLOTS

1U

FRONT PANEL



SPECIFICATIONS

Optical	
Fibre Type	Standard single-mode fibre, G.652
Operating Band	C-band
Relative Dispersion Slope @1545nm	0.004 ±20% nm^{-1}
Light Reflection	−27dB
Maximum Allowable Input Power	+23dBm
Optical Interface	LC/UPC (LCU) · SC/UPC (SCU) · LC/APC (LCA) · SC/APC (SCA), other connector types available on request
Environmental	
Temperature Range	−5°C–70°C
Storage Temperature Range	−40°C–85°C
Environmental / Reliability Testing	Compliant with Telcordia GR-2854 and GR-1221 standards
RoHS	RoHS-6 compliant (lead-free)
Mechanical	
1U Rackmount Package	(D)220mm×(W)442mm×(H)44mm, any compensation distance
LGX Package	2 slots of a 1U LGX rack (two modules per rack), compensation distance 60km or less only (see Ordering Information)

COMPENSATION DISTANCE

DISTANCE	DISPERSION @1545nm	INSERTION LOSS	POLARIZATION MODE DISPERSION	POLARIZATION DEPENDENT LOSS
15km	−255±7.5ps/nm	≤2.9dB	≤0.3ps	≤0.1dB
20km	−340±20ps/nm	≤3.5dB	≤0.5ps	≤0.1dB
25km	−420±12ps/nm	≤3.5dB	≤0.3ps	≤0.1dB
30km	−500±15ps/nm	≤3.85dB	≤0.4ps	≤0.1dB
40km	−670±30ps/nm	≤5.0dB	≤0.8ps	≤0.1dB
60km	−1000±40ps/nm	≤6.8dB	≤1.0ps	≤0.1dB
70km	−1170±35ps/nm	≤6.9dB	≤0.6ps	≤0.1dB
80km	−1340±50ps/nm	≤8.7dB	≤1.2ps	≤0.1dB
85km	−1425±42.5ps/nm	≤8.5dB	≤0.7ps	≤0.1dB
100km	−1670±60ps/nm	≤10.7dB	≤1.3ps	≤0.1dB
120km	−2040±60ps/nm	≤12.9dB	≤1.4ps	≤0.1dB

ORDERING INFORMATION

NAME	Fixed Dispersion Compensation Module
DESCRIPTION	Fixed dispersion compensation module. Available as 1U standalone rackmount (any Distance) or, for Distance ≤60km, as an LGX module occupying 2 slots of a 1U LGX rack (two modules per rack). 11 fixed compensation points from 15 to 120km, 4 connector options.
PART NUMBER	WDM-DCM- **{Distance}** - **{Connector}** - **{Format}**

{Distance}	15 · 20 · 25 · 30 · 40 · 60 · 70 · 80 · 85 · 100 · 120 (km), see Compensation Distance table above, required
{Connector}	LCU (LC/UPC) · SCU (SC/UPC) · LCA (LC/APC) · SCA (SC/APC), other connector types on request, required
{Format}	1U (standalone rackmount, any Distance) · LGX (2 slots of a 1U LGX rack (two modules per rack), Distance 60km or less only), required