

Dispersion Compensation Modules

Key Features

Dispersion compensation for ITU-T G.652 fiber

Wide band slope dispersion compensation

Low loss

Low PDL

High FOM (Figure of Merit)

Applications

Digital and analog systems, such as:

High bit rate systems

Long Haul and Ultra Long Haul networks

DWDM transmission

CATV

For more info

Please contact us at:

North America: **514.748.4848**
888.922.1044

Europe & Asia: **+33 (0) 1 69 80 58 33**
or via e-mail at sales@3spgroup.com

2002 DCM

Wide Band Dispersion Compensation Modules Standard Single-Mode Fiber

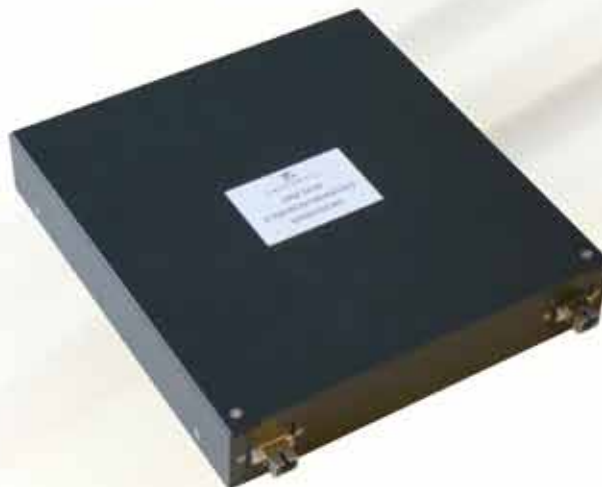
The 2002 DCM product family from 3SPGroup provides compensation for the chromatic dispersion which is generated when a signal propagates along a standard single-mode fiber (ITU-T G.652).

As signal properties are restored when it travels through the dispersion compensation module longer transmission lengths are possible in high bit rate DWDM or CATV systems.

Modules are built with a negative dispersion fiber; they are proposed for compensation in the C band, in the L band, or the C+L band.

Customized models are available upon request.

This product has undergone a dedicated qualification program.



2002 DCM

**Wide Band Dispersion Compensation Modules
Standard Single-Mode
Fiber**



TECHNICAL SPECIFICATIONS*

Parameters	Symbol	Min	Typ	Max	Unit
Environmental					
Operating temperature	T_{op}	-5	-	+70	°C
Storage temperature	T_{sto}	-40	-	+75	°C
Optical					
Operating wavelengths • C band • L band • C+L band	λ_{op}	1525 1570 1525	-	1565 1610 1610	nm
Dispersion • C band @1545nm • L band @1590nm • C+L band @1545nm @1590nm	D		-17 ± 3% -19 ± 3% -16.25 ± 3% -19 ± 4%		ps/nm
Relative dispersion slope • C band @1545nm • L band @1590nm • C+L band @1545nm @1590nm	RDS		0.0034 ± 20% 0.0029 ± 20% 0.0034 ± 20% 0.0029 ± 20%		nm ⁻¹
Non linear coefficient	$-n_2 / A_{eff}$	-	1.1×10^{-9}	1.7×10^{-9}	W ⁻¹
Fiber effective area • C band @1550nm • L band @1590nm • C+L band @1550nm @1590nm	A_{eff}	18 18 16 18	21 21 19 21	-	m ²
Polarization dependant loss	PDL	-	-	0.1	dB _{P-P}
SBS threshold	P_{SBS}	7	-	-	dBm

2002 DCM

Wide Band Dispersion Compensation Modules Standard Single-Mode Fiber



Compensation for C-band					Unit
Compensation distance	20	40	60	80	km
Dispersion @1545nm	-340	-680	-1020	-1360	ps/nm
Residual dispersion slope @1545nm	0.0034				nm ⁻¹
Insertion loss @1550nm	≤3.4	≤4.7	≤6.1	≤7.4	dB
PMD (1)	≤0.5	≤0.6	≤0.7	≤0.8	ps

Compensation for L-band					Unit
Compensation distance	20	40	60	80	km
Dispersion @1590nm	-380	-760	-1140	-1520	ps/nm
Residual dispersion slope	0.0029				nm ⁻¹
Insertion loss @1550nm	≤3.5	≤4.9	≤6.4	≤7.8	dB
PMD (1)	≤0.5	≤0.6	≤0.7	≤0.8	ps

Compensation for C+L-band					Unit
Compensation distance	20	40	60	80	km
Dispersion @1545nm	-325	-650	-975	-1300	ps/nm
@1545nm	-380	-760	-1140	-1520	
Residual dispersion slope @1545nm	0.0034				nm ⁻¹
@1545nm	0.0029				
Insertion loss @1550nm	≤3.4	≤4.9	≤6.3	≤7.8	dB
PMD (1)	≤0.5	≤0.6	≤0.7	≤0.8	ps

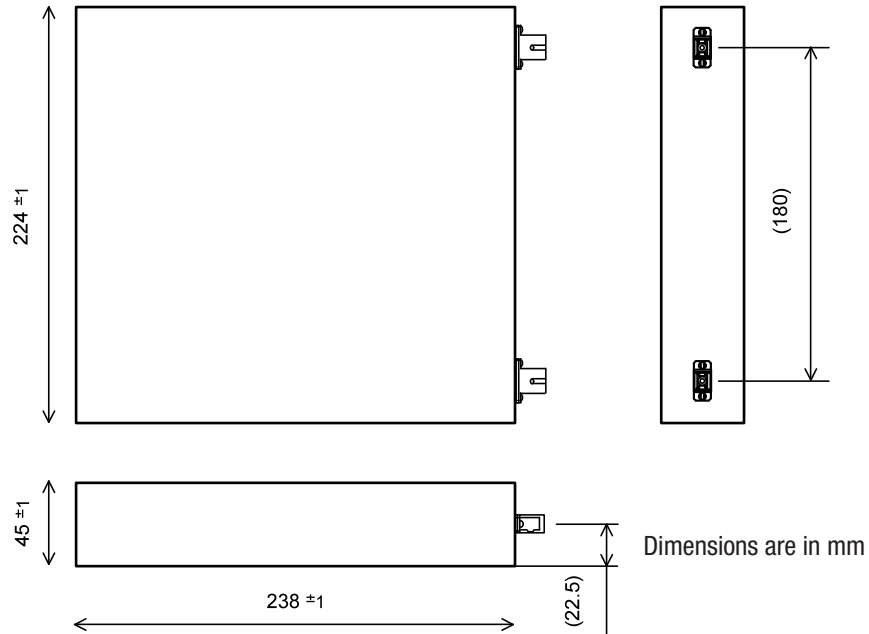
(1) PMD is an averaged value over the specified wavelength range using the Jones Matrix method

2002 DCM

Wide Band Dispersion Compensation Modules
Standard Single-Mode Fiber



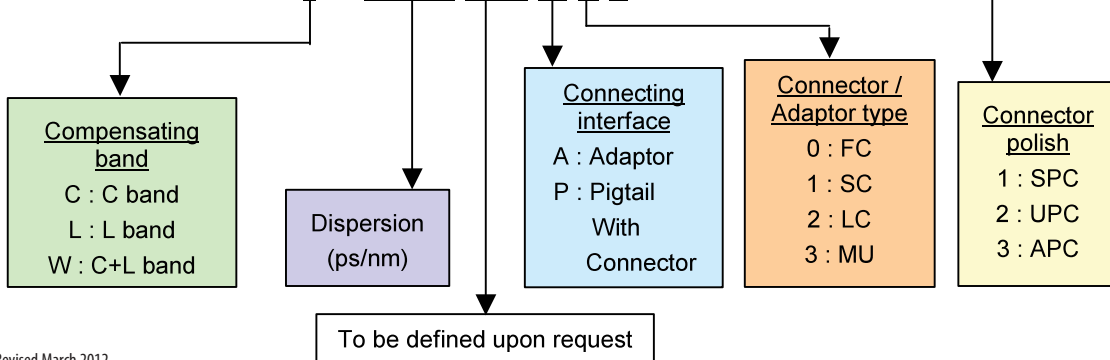
MECHANICAL DETAILS ADAPTOR TYPE CASE



OPTION - CASE WITH CONNECTORIZED PIGTAIL

Fiber type	Conventional SMF
Pigtail length	1m
Cable diameter	2mm
Connector type	FC, SC, LC, MU
Connector polish	SPC, APC

3CND20 t N uuuu vvv w x z



Revised March 2012

Please note: information in this document is typical and must be specifically confirmed in writing by your supplier before it becomes applicable to any order or contract. Information is subject to change without notice.
©2011 3S PHOTONICS S.A.S.

ORDERING INFO

Please contact your Sales Manager. 3SPGroup can also develop custom products to meet a wide range of technical requirements.

3SPGroup
North America: 514.748.4848
888.922.1044

Europe and Asia: +33 (0)1 69 80 58 33
www.3spgroup.com • sales@3spgroup.com