

Dispersion Compensation Modules

Key Features

Dispersion compensation for ITU-T G.653 fiber

Wide band slope dispersion compensation

L band operation

Low loss

Low PDL

High FOM (Figure of Merit)

Applications

High bit rate systems

Long Haul and Ultra Long Haul networks

DWDM transmission

For more info

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2003 DCM

Wide Band Dispersion Compensation Modules Dispersion Shifted Fiber

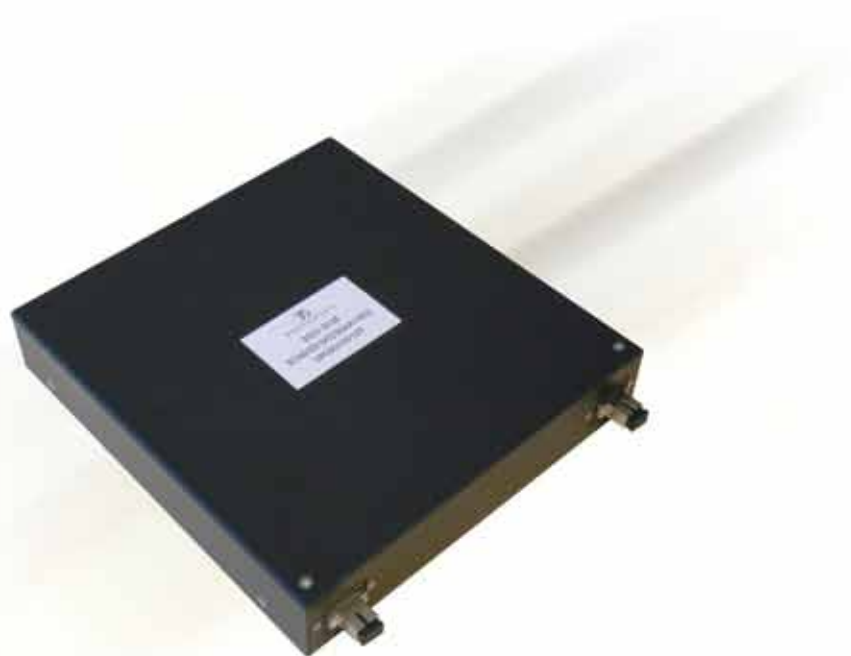
The 2003 DCM product family from 3SPGroup provides compensation for the chromatic dispersion which is generated when a signal propagates along a dispersion shifted single-mode fiber (ITU-T G.653).

As signal properties are restored when it travels through the dispersion compensation module it becomes possible to extend transmission lengths in high bit rate DWDM systems.

Modules are built with a negative dispersion fiber and are designed to optimize transmission performance in the L band.

Customized models are available upon request.

This product has undergone a dedicated qualification program.



2003 DCM

Wide Band Dispersion
Compensation Modules
Dispersion Shifted Fiber



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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 wavelength - L band | λ_{op} | 1575 | - | 1605 | nm |
| Non linear coefficient | n_2 / A_{eff} | - | 2.2×10^{-9} | 2.8×10^{-9} | W^{-1} |
| Fiber effective area @1590nm | A_{eff} | 11 | 14 | - | m^2 |
| SBS threshold | P_{SBS} | 6 | - | - | dBm |

| Item | | | | | Unit |
|-----------------------------------|-------------|--------------|--------------|---------------|------------|
| Compensation distance | 20 | 40 | 60 | 80 | km |
| Dispersion @1590nm | -59 ± 3 | -118 ± 5 | -177 ± 8 | -236 ± 10 | ps/nm |
| Residual dispersion slope @1590nm | 0.018 ± 20% | | | | nm^{-1} |
| Insertion loss @1590nm | ≤ 2.8 | ≤ 3.4 | ≤ 4.0 | ≤ 4.6 | dB |
| Polarization dependant loss - PDL | ≤ 0.20 | | | | dB_{p-p} |
| PMD (1) | ≤ 0.4 | ≤ 0.5 | ≤ 0.5 | ≤ 0.6 | ps |

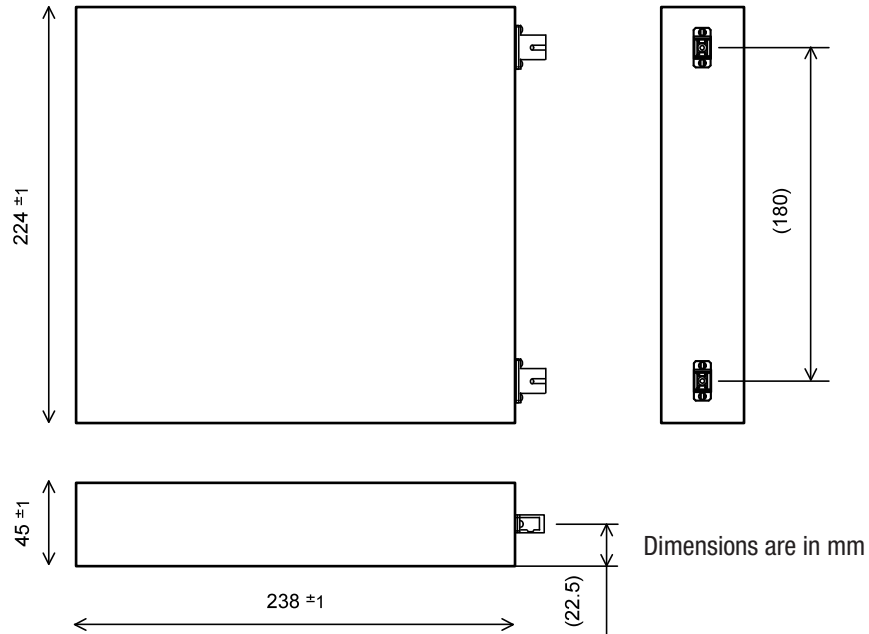
(1) PMD is an averaged value over the specified wavelength range using the Jones Matrix method

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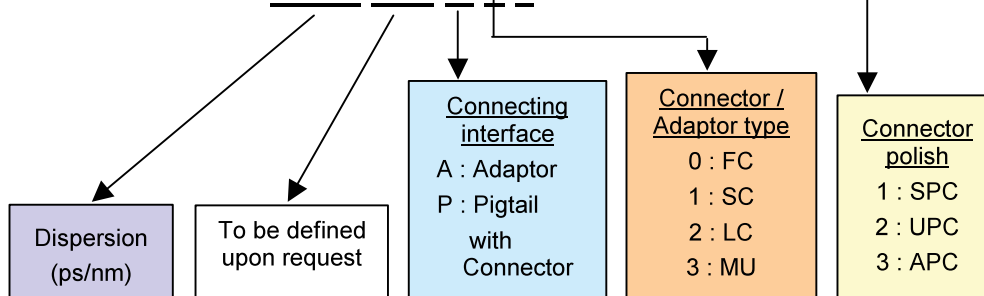
MECHANICAL DETAILS ADAPTOR TYPE CASE



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 |

3CND30 L N uuuu vvv w x z



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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.
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ORDERING INFO

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

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