

Ultra-miniaturized Dispersion Compensation Module

In the applications of optical fibre communication and fibre laser, dispersion management is an important means to control optical parameters such as pulse and nonlinear. The ultra-miniaturized dispersion compensation fibre module(SDCM) can compensate the dispersion and dispersion slope at C-band for standard single-mode fiber(G.652) and the system residual dispersion is optimized.

Characteristics

- 100% slope compensation of G.652 fiber in C-band (Typical)
- Optimized residual dispersion
- Broadband dispersion compensation in DWDM system
- Low insertion loss
- Low Polarization Mode Dispersion
- Small package
- Meet or exceed Telcordia GR-2854-CORE specification
- Meet or exceed Telcordia GR-21221-CORE specification
- Different package styles, connector types and pigtail lengths are available



Applications

- Long-haul telecommunication systems with standard single-mode fiber (G.652)
- DWDM transmission systems
- SDH transmission system
- Cable AM television video systems
- Dispersion adjusting

Specifications-1

Product Type	ADCM-10	ADCM-30	ADCM-50	ADCM-70	ADCM-90	ADCM-110
Dispersion@1545nm(ps/nm)	-170 ± 5	-500 ± 15	-835 ± 25	-1170 ± 35	-1500 ± 45	-1840 ± 55
Relative Dispersion Slope@1545nm(nm ⁻¹)	0.0036 ± 10%					
Insertion Loss(dB)*①	≤2.2	≤3.5	≤4.8	≤6.2	≤7.6	9.0
Polarization Mode Dispersion(ps)*②	≤0.3	≤0.4	≤0.5	≤0.7	≤0.8	≤0.9
Polarization Dependent Loss(dB)	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1
Wavelength Dependent Loss(dB)	≤0.5	≤0.5	≤0.6	≤0.6	≤0.7	≤0.7
Return Loss(dB)	Connector Return Loss < -45			Module Return Loss < -27		

Specifications-2

Product Type	ADCM-20	ADCM-40	ADCM-60	ADCM-80	ADCM-100	ADCM-120
Dispersion@1545nm (ps/nm)	-340 ± 10	-670 ± 20	-1000 ± 30	-1330 ± 40	-1670 ± 50	-2010 ± 60
Relative Dispersion Slope @1545nm(nm ⁻¹)	0.0036 ± 10%					
Insertion Loss(dB)	≤2.8	≤4.1	≤5.5	≤6.9	≤8.3	≤9.7
Polarization Mode Dispersion(ps)	≤0.3	≤0.4	≤0.6	≤0.7	≤0.8	≤0.9
Polarization Dependent Loss(dB)	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1
Wavelength Dependent Loss(dB)	≤0.5	≤0.5	≤0.6	≤0.6	≤0.7	≤0.7
Return Loss(dB)	Connector Return Loss < -45			Module Return Loss < -27		

*①Insertion Loss is the maximum loss over operating wavelength range(1525nm - 1565nm)

*②PMD is average differential group delay over the wavelength range measured by Jones Matrix Method

*Module with other compensation length can be customized

Nonlinear Properties

Parameters	Minimum	Maximum
SBS Threshold(dBm)	6	-
Nonlinear Coeff.(n ₂ /A _{eff})(W ⁻¹)	-	1.4 × 10 ⁻⁹
Effective Area(A _{eff})(μm ²)	20	-
Maximum Input Power(dBm)	-	23

Environmental Characteristics

Parameters	Minimum	Maximum
Operating Temperature Range(°C)	-5	70
Storage Temperature Range(°C)	-40	85
Relative Humidity(%RH)	-	85
Environmental/Reliability	Meet Telcordia GR-2854 and GR-1221 Specification	

Packing Style

Packing Style	Dimensions (mm)	Connector Type	Pigtail Length
Standard Size	185×175×36	LC/UPC or Customized	Customized
Others	Neutral Packaging or Customized		