PRODUCT INTRODUCTION

Miniaturized DCM

In applications such as fibre communication and industrial laser, dispersion management is an important means to control optical properties such as impulse and nonlinearity. The miniaturized dispersion compensating module provided by YOSC can perform dispersion and dispersion slope compensation for standard single-mode fibre (G.652) in the C-band, optimize the residual dispersion of the system, and improve the performance of the optical transmission system.

Features

- Broadband dispersion compensation and extremely low residual dispersion for DWDM systems
- C-band 100% slope compensation for G. 652 Fibre (standard value)
- Module miniaturization
- Low insertion loss
- Low polarization mode dispersion
- The performance indicators certified to Telcordia GR-2854-CORE standard
- Reliability certified to Telcordia GR-1221-CORE standard
- Different packaging styles, connector types and lengths are available

Applications

- G.652 standard single-mode fibre
- Long distance and metro communication systems
- DWDM transmission system
- SDH transmission system
- CATV cable television system
- Dispersion adjustment

Parameters

Specifications-1

Type	Unit	AD-010	AD-030	AD-050	AD-070	AD-090	AD-110
Compensating length	km	10	30	50	70	90	110
Dispersion@1545nm	ps/nm	-170 ±5	-500 ±15	-835 ±25	-1170 ±35	-1500 ±45	-1840 ±55
1545nm relative dispersion slope	nm^{-1}	0.0036±10%					
Insertion loss *①	dB	≤2.2	≤3.5	≤4.8	≤6.2	≤7.6	≤9.0
Polarization mode dispersion*②	ps	≤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	Return Loss of Connector ＜-45			Return Loss of Module ＜-27		

Specifications-2

Type	Unit	AD-020	AD-040	AD-060	AD-080	AD-100	AD-120
Compensating length	km	20	40	60	80	100	120
Dispersion@1545nm	ps/nm	-340 ±10	-670 ±20	-1000 ±30	-1330 ±40	-1670 ±50	-2010 ±60
1545nm relative dispersion slope	nm^{-1}	0.0036±10%					
Insertion loss *①	dB	≤2.8	≤4.1	≤5.5	≤6.9	≤8.3	≤9.7
Polarization mode dispersion*②	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	Return Loss of Connector ＜-45			Return Loss of Module ＜-27		

*①Insertion loss is the maximum value within the application band (1525nm ~1565nm)
*②Polarization mode dispersion is the average differential group delay measured by the Jones matrix method in the application band

Other indicators

Nonlinear characteristics

Parameters	Minimum	Maximum
Brillouin scattering threshold (dBm)	4	-
Nonlinear coefficient (n_2/A_{eff}) (W^{-1})	-	1.4×10^{-9}
Effective area (A_{eff}) (μm^2)	20	-
Maximum input optical power (dBm)	-	23

Environmental indicators

Items	Minimum	Maximum
Operating temperature range (°C)	-5	70
Storage temperature range (°C)	-40	85
Relative humidity (%RH)	-	85
Environmental/Reliability testing	Compliant with Telcordia GR-2854 and GR-1221 standards	

Packaging Style	Dimension (mm)	Type of Connector	Length of Connector
Standard dimension	200×190×40	LC/UPC or according to customer's requirements	According to customer's requirements
Other	Neutral packaging or according to customer's requirements		