

Ultra-miniaturized DCM for O+E+C Band

The ultra-miniaturized dispersion compensation module for O+E+C band can adjust the dispersion both at O+C-band for standard single-mode fibre (G.652), so as to optimize the residual dispersion of the system. At the same time, the module has ultra-low insertion loss at O+E+C-band.

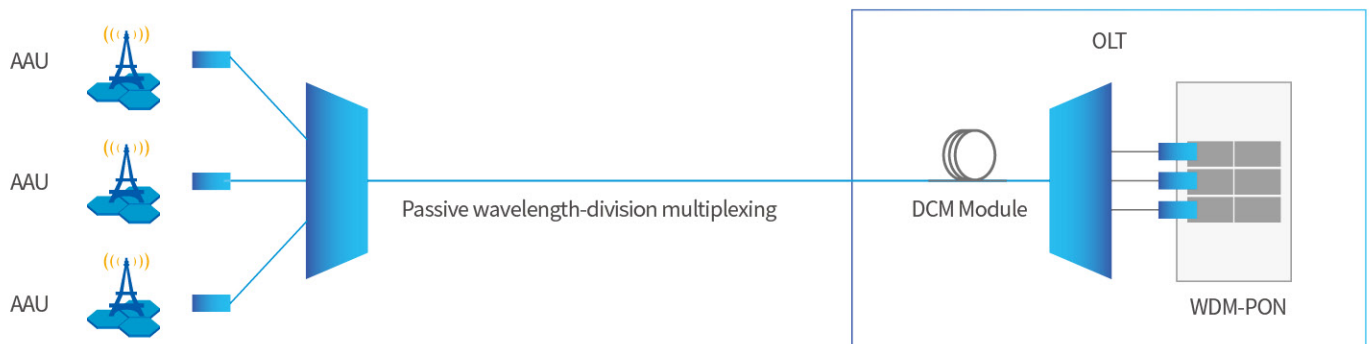
Based on the newest TDCF design, mature and reliable processing technology, the module can improve the performance of optical transmission system. Also, ultra-miniaturized dimensions of the module can meet the requirement of system miniaturization.

Characteristics

- Broadband dispersion compensation in DWDM system
- Ultra-low insertion loss
- Ultra-low polarization mode dispersion
- Meet or exceed Telcordia GR-2854-CORE specification
- Meet or exceed Telcordia GR-1221-CORE specification
- Ultra-miniaturized dimensions

Applications

- Adjusting dispersion in O-band for 5G front-haul transmission system
- Long-haul telecommunication systems with standard single-mode fibre (G.652)
- DWDM transmission system
- SDH transmission system
- Cable AM television video system



Specifications

Product Type	AD-1KM	AD-2KM
Fibre	TDCF	
Operating Wavelength (nm)	O-band (1320 - 1375)	
	E-band (1410 - 1480)	
	C-band (1525 - 1565)	
Length (km)* ^①	0.95 to 1.05	1.95 to 2.05
Dispersion@1331nm (ps/nm)	-63 to -83	-130 to -162
Dispersion@1351nm (ps/nm)	-65 to -86	-133 to -168
Dispersion@1371nm (ps/nm)	-69 to -94	-142 to -184
Insertion Loss@1320 - 1375nm(dB)	≤ 2.0	≤ 3.3
Insertion Loss@1410 - 1470nm(dB)	≤ 2.0	≤ 3.2
Insertion Loss@1525 - 1565nm(dB)	≤ 1.5	≤ 2.2
Polarization Mode Dispersion (ps) * ^②	≤ 0.25	≤ 0.3
Polarization Dependent Loss (dB)	≤ 0.1	
Wavelength Dependent Loss@1525-1565nm (dB)	≤ 0.3	
Connector Return Loss (dB)	< -45	

*^① Other fibre length is available as requested

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

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	-

Environmental characteristics

Item	Minimum	Maximum
Operating Temperature Range (°C)	-5	70
Storage Temperature Range (°C)	-40	85
Environmental/Reliability	Telcordia GR-2854 and GR-1221 Qualified	

Packing Style

Packing Style	Product Type	Dimensions (mm)	Connector	Pigtail
Ultra-miniaturized Case	AD-1KM	100×100×15	LC/UPC	2.0mm loose tube, Length: 0.5 ± 0.05
	AD-2KM	125×105×20	or as Requested	Adapter
Others		Neutral Packing or as Requested		