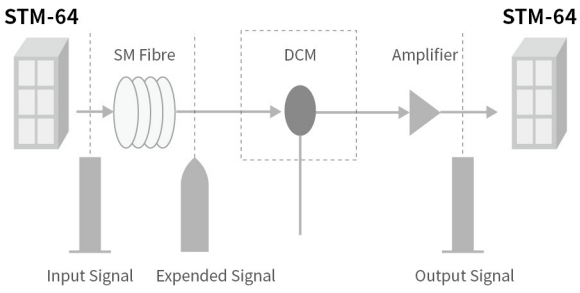
Dispersion Compensating Fibre (DCF)

YOFC dispersion compensating fibre is specially developed through proprietary PCVD-based technology. Taking advantages of PCVD process, YOFC is able to manufacture complex index-profile shapes accuratelly, therefore, to get the optimized products with the best compromise between insertion loss and residual dispersion over the compensated operating wavelength. Customized fibres with special center wavelength and dispersion are available.

Characteristics

- Broad band dispersion compensating of DWDM network and extremely low residual dispersion
- 80% - 120% slope compensation in C/L band
- Low insertion loss and high negative dispersion coefficient
- High figure of merit（FOM）
- Low PMD
- Customized encapsulation type, dimension, connector type and jumper length
- Excellent splicing characteristics, spliced by one time discharge



Applications

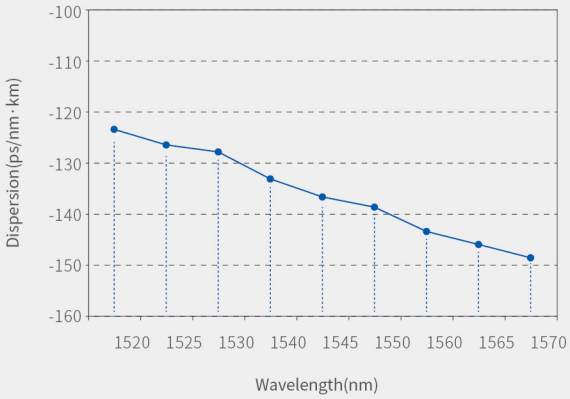
- Single mode fibre backbone and metropolitan area networks based on recommendation G.652
- DWDM networks
- SDH network
- CATV
- Dispersion adjustment

Products

Standard Products:

- DCF for G.652 C band (Part NO. DM1012-A)
- DCF for G.652 C band (Part NO. DM1010-E)
- DCF for G.655 C band (Part NO. DM1011-A)
- DCF for CATV and high FOM（Part No.DM1013-A）

G.652 DCF Dispersion Curve



Specifications

Fibre Type	TDCF-G.652C/170	BD NDCF-G.652C/250	BD SNDCF-G.652C/170	DCF-G.655C/250	SDCF-G.652C/170LD
Part No.	-	DM1012-A	DM1012-D	DM1011-A	DM1013-A
Optical Properties					
Operating Wavelength (nm)	1525 - 1565	1525 - 1565	1525 - 1565	1525 - 1565	1525 - 1565
MFD (μm)	5.0±1.0@1550nm	5.0 ± 1.0@1550nm	5.0 ± 1.0@1550nm	4.5 ± 1.0@1550nm	5.0 ± 1.0@1550nm
1525~1565nm Attenuation (dB/km)	≤0.62	≤0.62	≤ 0.62	≤ 1.4	≤ 0.6
1545nm Dispersion Coefficient (ps/nm·km)	-100 to -250	-100 to -200	-100 to -200	-160 to -360	≤ -160
1545nm Relative Dispersion Slope (nm^{-1})	0.00309 - 0.00410	0.00309 - 0.00410	0.00309 - 0.00410	0.0176 - 0.0264	0.00309- 0.00410
Geometrical Properties					
Cladding Diameter (μm)	87.0 ± 4.0	120.0 ± 10.0	120.0 ± 10.0	110.0 ± 10.0	120.0 ± 10.0
Coating Diameter (μm)	170.0 ± 10.0	245.0 ± 10.0	175.0 ± 15.0	245.0 ± 10.0	175.0 ± 15.0
Cladding Non-circularity (%)	≤1.0	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Core/Cladding Concentricity (μm)	≤1.0	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Coating Type	Dual-layer UV-acrylate	Dual-layer UV-acrylate	Dual-layer UV-acrylate	Dual-layer UV-acrylate	Dual-layer UV-acrylate

- 010001 Rev 202211