YOFC
Smart Link Better Life.

Few-mode Fibre

Product

The mode division multiplexing (MDM) transmission system uses the limited orthogonal modes in few mode fibre (FMF) as the independent channels for information transmission in order to multiply the transmission capacity of the system. FMF uses different modes in the fibre as a new degree of freedom, improving the spectrum efficiency of the system. As FMF has large mode field area, its nonlinear tolerance is high. It not only improves the capacity of optical transmission system, but also avoids the impact of nonlinear effects on the system. Therefore, using the limited, stable modes in the few-mode fibre as independent channels for mode multiplexing can greatly improve the capacity of the system and solve the future bandwidth crisis of single-mode fibres.

Applications

- High-capacity FMF transmission system
- Mode division multiplexing system
- Laser, sensor

Features

- 2-20 modes at wavelength 1550nm, step-index and graded-index fibre sections, customizable FMF in terms of the type of its cross section
- Low attenuation for each mode
- Well-controlled bending attenuation in the case of small-radius bending
- Low splice loss and high splice efficiency guaranteed by accurate geometrical parameters

Yangtze Optical Fibre and Cable Joint Stock Limited Company

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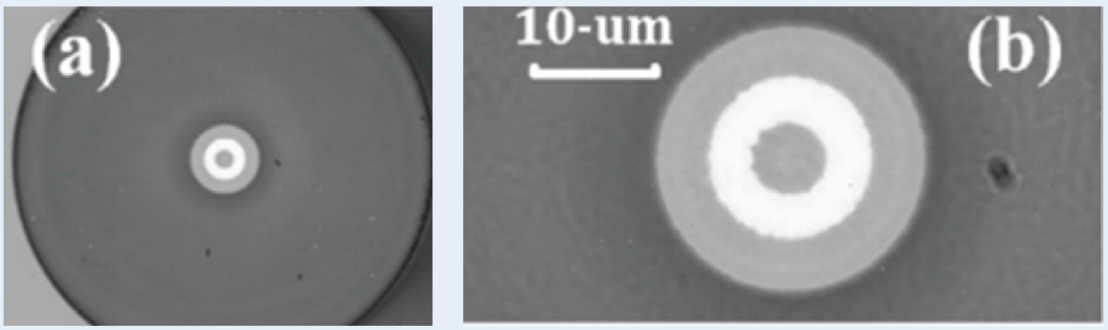
Specifications

Optical properties@1550nm		Typical value	Data range
Core Diameter(μm)		–	5 - 35
Cladding Diameter(μm)		125	125 ± 0.7
Cladding Non-circularity		–	< 0.7%
Operating Wavelength(nm)		–	1520 - 1565
Coating Diameter(μm)		245	245 ± 3
Dispersion(ps/(nm·km))	LP01 - LPmn	–	20 - 28
Effective Area(μm^2)	LP01 - LPmn	–	≥ 110
Attenuation Coefficient(dB/km)	LP01	–	≤ 0.22
Differential Group Delay(ps/m)	LPmn-LP01 (Step-Index)	–	≥ 1.7
	LPmn-LP01 (Graded-Index)	–	≤ 0.5

Cross Section



(a) (b) Multi-ring core FMF end face

Customization

①The cross section can be customized ②The number of modes can be customized

③Geometrical and optical parameters can be customized

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