



> Multi-core Fibre

— Product

With the development of space division multiplexing and multi-core fibre sensor technologies, multi-core fibre will be a vital branch of fibre development. Multi-core fibre (MCF) is a new kind of fibre with multiple separate fibre cores co-existing in the same cladding. Based on the concept of space division multiplexing (SDM), multi-core fibre can transmit multi-channel optical signals simultaneously and is expected to be a breakthrough technology against the capacity crunch of optical transmission system over a single mode fibre. YOFC's single-mode multi-core fibre has a wide promising future in optical transmission field.

This product can achieve long-distance SDM optical signal transmission , and can be widely used in communication, sensor, industry, medical equipment, and other fields.

— Applications

- Large capacity transmission system with core division multiplexing technology
- Laser
- Sensor

— Features

- Customizable number of fibre cores with low attenuation
- Consistent distance between fibre cores
- Customizable core cross-section and number of modes
- Well-controlled bending attenuation in the case of small-radius bending
- Low splice loss and high splice efficiency guaranteed by accurate geometrical parameters
- Customizable mode field diameter (MFD), cut-off wavelength, core-to-core distance, and size

Yangtze Optical Fibre and Cable Joint Stock Limited Company

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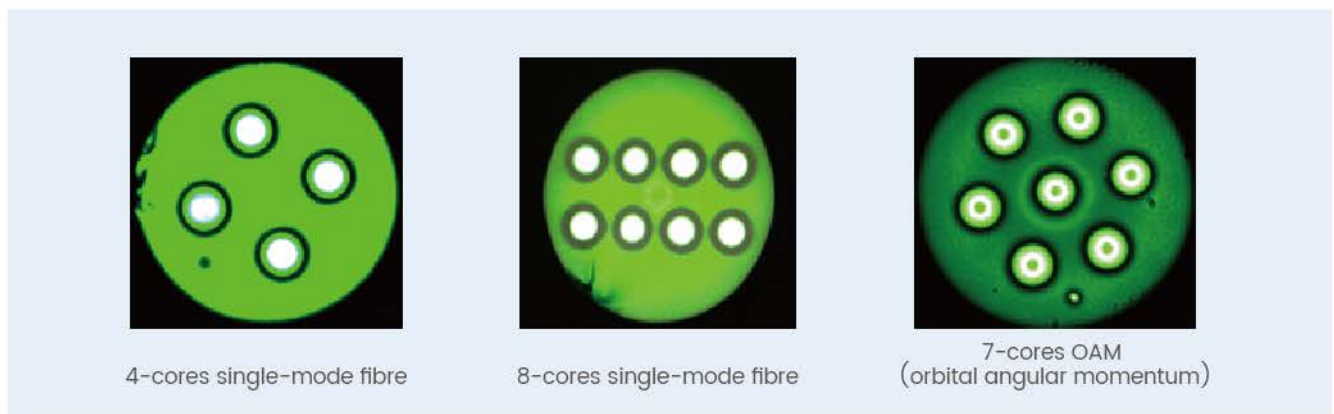
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— Specifications

Parameter (1550nm)	Range	Typical Value	
Number of Cores(PCS)	2 - 19	Customized on demand	
Number of Modes(PCS)	2 - 19	Customized on demand	
Core-to-core Distance(μm)	15 - 55	Customized on demand	
Crosstalk(XT)(dB)	-	Related to the core-to-core distance	
Operating Wavelength(nm)	1450 - 1700	1550	
Cladding Diameter(μm)	$(125 - 250) \pm 0.7$	-	
Coating Diameter(μm)	$(245 - 370) \pm 10$	-	
Attenuation(dB/km)	≤ 0.3	0.22	
Dispersion(ps/(nm·km))	≤ 25	20 - 24	
Dispersion Slope(ps/(nm ² ·km))	< 0.11	0.091	
Proof Test Level(Kpsi)	100	100 - 200	
Tensile Strength(GPa)	F _{15%}	≥ 3.14	5
	F _{50%}	≥ 3.80	5.1
Coating Strip Force(N)	Typical average	0.8 - 5	1.1
	Peak	0.8 - 8.9	1.5
Dynamic Fatigue Parameter (n _d)	> 20	22	

— Cross Section:



— Customization

- ①The cross section can be customized
- ②The number of cores and modes can be customized
- ③Geometrical and optical parameters can be customized

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