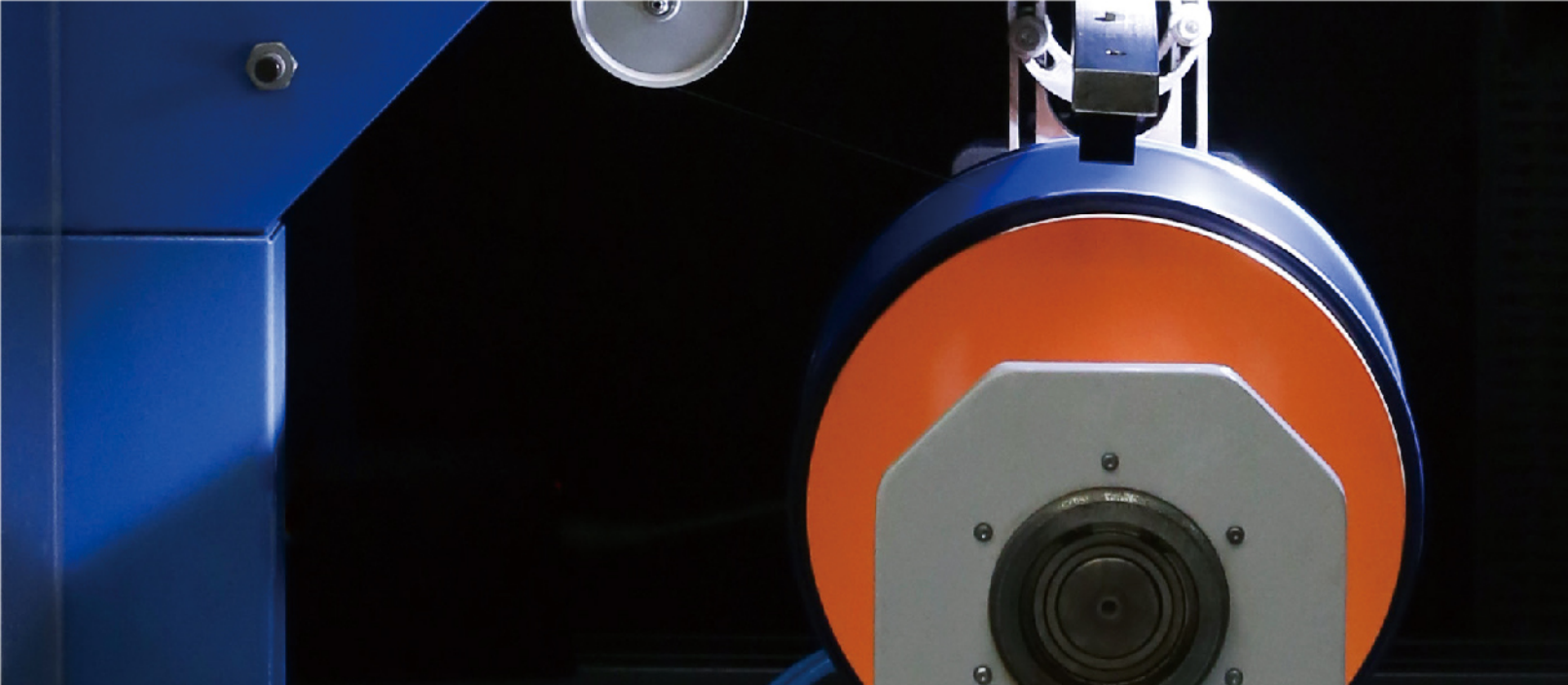




Matched-cladding Single-mode Fibre

The YOFC matched-clad single-mode fibre for component (CSF) is a special single-mode fibre developed for optical fibre devices. The optical fibre is manufactured using the PCVD process, ensuring excellent optical and geometrical consistency. The optical fibre is designed with a special matched cladding structure and a Ge/F co-doped material system, achieving fibre material matching. This results in the optical fibre possessing fused biconical taper and coupling capabilities, making it suitable for optical fibre couplers and other related products. In this series, CS1012-A and CS1013-A are suitable for light source coupled single-mode output within the 580nm-850nm visible band. CS1015-A and other optical fibres designed for the 980/1,060nm wavelength exhibit excellent tapering performance. CS1011-A and CS1011-B are specially developed for tapered components in the 1,310 nm wavelength, while CS1018-A and CS1018-B are specially developed for tapered components in the 1,550 nm wavelength. The macro-bending performance of CS1018-A is better than that of G657A2.

Features

- Accurate geometrical indicators
- Excellent mechanical performance
- Excellent bending insensitivity
- Low splicing loss
- Low tapering loss
- Excellent uniformity and stability

Applications

- Optical fibre couplers, splitters and combiners
- Optical fibre lasers, optical fibre amplifiers and DWDM system
- Pump laser pigtails
- Optical fibre gratings
- Fibre sensors and fibre-optic gyroscopes
- C/L-band low-loss fused optical devices

Fibre type	CS980-80-16/165	CS980-80-20/165	CS1060-80-14/165	CS1310-80-16/165	CS1550-80-18/165
Part No.	CS1015-F	CS1015-D	CS1016-C	CS1011-B	CS1018-B
Optical properties					
Typical operating wavelength (nm)	980/1550	980/1550	980/1060/1550	1310/1550	1550
Fibre cut-off wavelength (nm)	930±40	930±40	930±40	1240±50	1450±50
Mode field diameter (μm)	5.0±0.5@980nm	4.0±0.5@980nm	5.9±0.5@980nm	6.4±0.5@1310nm	6.3±0.5@1550nm
	7.5±0.5@1550nm	6.5±0.5@1550nm	6.2±0.5@1060nm	7.2±0.5@1550nm	
Attenuation (dB/km)	≤2.5@980nm	≤2.5@980nm	≤2.1@980nm	≤0.75@1310nm	≤0.5@1550nm
	≤1.0@1550nm	≤1.0@1550nm	≤1.5@1060nm	≤0.5@1550nm	
Geometrical properties					
Cladding diameter (μm)	80.0±1.0	80.0±1.0	80.0±1.0	80.0±1.0	80.0±1.0
Coating diameter (μm)	165.0±5.0	165.0±5.0	165.0±5.0	165.0±5.0	165.0±5.0
Cladding non-circularity (%)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
Core/Cladding offset (μm)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
Macro-bending loss					
1 turn, Φ20 mm (dB)	980nm	-	≤0.02	-	-
	1310nm	-	-	≤0.01	-
	1550nm	-	≤0.05	-	≤0.01
1 turn, Φ30 mm (dB)	980nm	≤0.01	-	-	-
	1550nm	≤0.08	-	-	-
Mechanical performance					
Proof test level (kpsi)	100 or 200	100 or 200	100 or 200	100 or 200	100 or 200
Environmental properties					
Operation temperature (°C)	-60 ~ +85	-60 ~ +85	-60 ~ +85	-60 ~ +85	-60 ~ +85

	CS630-125-13/250	CS780-125-14/250	CS980-125-16/250	CS980-125-20/250	CS1060-125-14/250	CS1310-125-16/250	CS1550-125-13/250
	CS1012-A	CS1013-A	CS1015-A	CS1015-B	CS1016-A	CS1011-A	CS1018-A
Optical properties							
Typical operating wavelength (nm)	580/630	780/850	980/1550	980/1550	980/1060/1550	1310/1550	1550
Fibre cut-off wavelength (nm)	580±40	730±40	930±40	930±40	930±40	1240±50	1400±50
Mode field diameter (μm)	4.0±0.4@630nm	4.5±0.4@780nm	5.0±0.5@980nm	4.0±0.5@980nm	5.9±0.5@980nm	6.4±0.5@1310nm	9.1±0.5@1550nm
			7.5±0.5@1550nm	6.5±0.5@1550nm	6.2±0.5@1060nm	7.2±0.5@1550nm	
Attenuation (dB/km)	≤12.0@630nm	≤4.3@780nm	≤2.5@980nm	≤2.5@980nm	≤2.1@980nm	≤0.75@1310nm	≤0.3@1550nm
			≤1.0@1550nm	≤1.0@1550nm	≤1.5@1060nm	≤0.5@1550nm	
Geometrical properties							
Cladding diameter (μm)	124.7±0.5	124.7±0.5	124.7±0.5	124.7±0.5	124.7±0.5	124.7±0.5	124.7±0.5
Coating diameter (μm)	240.0±5.0	240.0±5.0	240.0±5.0	240.0±5.0	240.0±5.0	240.0±5.0	240.0±5.0
Cladding non-circularity (%)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
Core/Cladding offset (μm)	≤0.5	≤0.5	≤0.3	≤0.3	≤0.3	≤0.3	≤0.5
Macro-bending loss							
1 turn, Φ15mm (dB)	1550nm	-	-	-	-	-	≤0.20
	1625nm	-	-	-	-	-	≤0.50
1 turn, Φ20mm (dB)	980nm	-	-	-	≤0.02	-	-
	1310nm	-	-	-	-	≤0.01	-
	1550nm	-	-	-	≤0.05	-	≤0.05
1 turn, Φ30 mm (dB)	980nm	-	-	≤0.01	-	-	-
	1550nm	-	-	≤0.08	-	-	-
Mechanical performance							
Proof test level (kpsi)	100 or 200	100 or 200	100 or 200	100 or 200	100 or 200	100 or 200	100 or 200
Environmental properties							
Operation temperature (°C)	-60 ~ 85	-60 ~ 85	-60 ~ 85	-60 ~ 85	-60 ~ 85	-60 ~ 85	-60 ~ 85