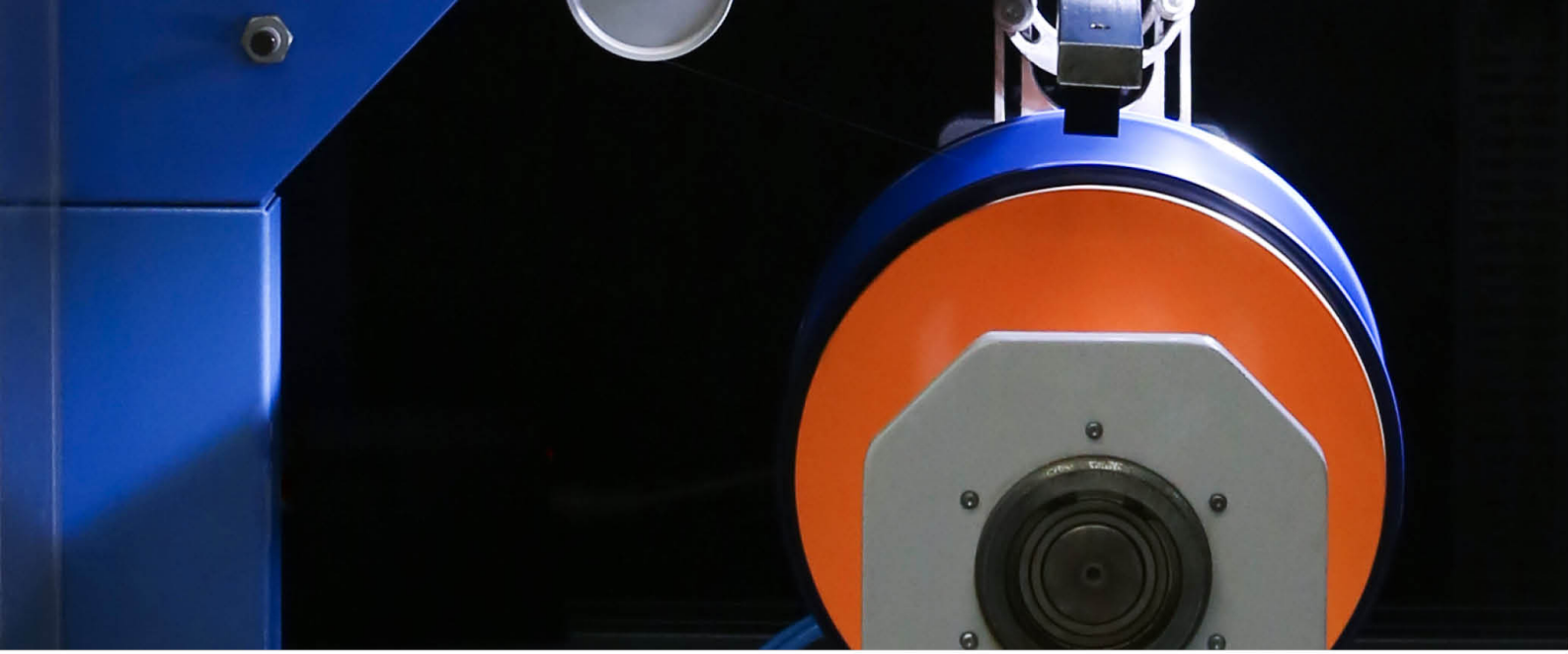

Matched-cladding Single-mode Fibre for Component(CSF)

YOFC matched-cladding single-mode fibre is particularly developed for optical components. The fibre offers excellent geometric and optic specifications by PCVD process. The fibre adopts special matched-cladding structure and Ge/F co-doped material system to achieve material matching, which makes the fibre can be used for taper couplers.

CS1012-A and CS1013-A are suitable for light source coupled single mode output in 580-850 nm visible band. CS1015-A and other 980/1060 nm fibres have excellent tapering performance. CS1011-A and CS1011-B are specially developed for tapered components in 1310 nm. CS1018-A and CS1018-B are specialty developed for tapered components in 1550 nm. And the macro-bending performance of CS1018-A is better than G.657A2.

Characteristics

- Tight geometric control
- Superior mechanical protection by dual acrylate coating system
- Ultra-low bending loss
- Low insertion loss
- Low splice loss
- Excellent consistency and reliability

Applications

- Optical fibre couplers, splitters and combiners
- Optical fibre lasers, EDFAs and DWDM system
- Pump laser pigtails
- Gratings
- Fibre sensors and gyroscope
- Low-loss fused optical devices for C/L band applications

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						
Operating Wavelength (nm)		980/1550	980/1550	980/1060/1550	1310/1550	1550
Fibre Cutoff 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 Concentricity (μm)		⩽0.5	⩽0.5	⩽0.5	⩽0.5	⩽0.5
Macro-bending Induced Loss						
ϕ20mm-1turn(dB)	980nm	-	⩽0.02	-	-	-
	1310nm	-	-	-	⩽0.01	-
	1550nm	-	⩽0.05	-	⩽0.01	⩽0.01
ϕ30mm-1turn(dB)	980nm	⩽0.01	-	-	-	-
	1550nm	⩽0.08	-	-	-	-
Mechanical Properties						
Proof Test Level (kpsi)		100 or 200	100 or 200	100 or 200	100 or 200	100 or 200
Environmental Properties						
Operating Temperature (°C)		-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85

Fibre Type		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
Part No.		CS1012-A	CS1013-A	CS1015-A	CS1015-B	CS1016-A	CS1011-A	CS1018-A
Optical Properties								
Operating Wavelength (nm)		580/630	780/850	980/1550	980/1550	980/1060/1550	1310/1550	1550
Fibre Cutoff 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 Concentricity (μm)		⩽0.5	⩽0.5	⩽0.3	⩽0.3	⩽0.3	⩽0.3	⩽0.5
Macro-bending Induced Loss								
ϕ15mm-1turn(dB)	1550nm	-	-	-	-	-	-	⩽0.20
	1625nm	-	-	-	-	-	-	⩽0.50
ϕ20mm-1turn(dB)	980nm	-	-	-	⩽0.02	-	-	-
	1310nm	-	-	-	-	-	⩽0.01	-
	1550nm	-	-	-	⩽0.05	-	⩽0.01	⩽0.05
ϕ30mm-1turn(dB)	980nm	-	-	⩽0.01	-	-	-	-
	1550nm	-	-	⩽0.08	-	-	-	-
Mechanical Properties								
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								
Operating Temperature (°C)		-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85

- 010003 Rev 202205