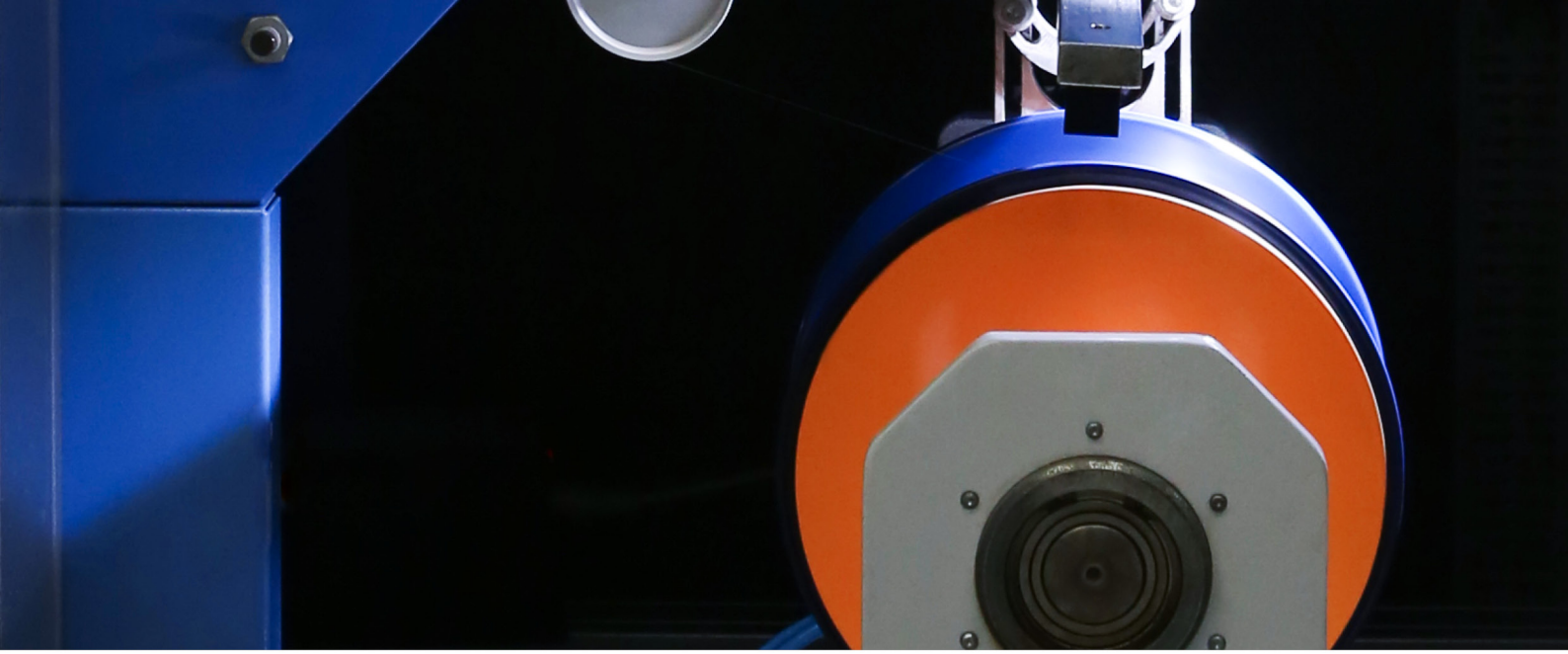

Matched-cladding Single-mode Fibre for Component(CSF)

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 (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 (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

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