



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

Specifications-1

Fibre Type			CS 630_125-13/250	CS 780_125-14/250	CS980_125-16/250	CS980_125-20/250	CS1060_125-14/250	CS1550_125-13/250
Part No.			CS1012-A	CS1013-A	CS1015-A	CS1015-B	CS1016-A	CS1018-A
Operating Wavelength (nm)			580/630	780/850	980/1550	980/1550	980/1060/1550	1550
Cutoff Wavelength (nm)			580 ± 40	730 ± 40	930 ± 40	930 ± 40	930 ± 40	1400 ± 50
Mode-field Diameter (μm)			4.0 ± 0.4 @630nm	4.5 ± 0.4 @780nm	5.0 ± 0.5@980nm 7.5 ± 0.5@1550nm	4.0 ± 0.5@980nm 6.5 ± 0.5@1550nm	5.9 ± 0.5@980nm 6.2 ± 0.5@1060nm	9.1 ± 0.5 @1550nm
Attenuation (dB/km)			≤ 12@630nm	≤ 4.3 @780nm	≤ 2.5@980nm ≤ 1.0@1550nm	≤ 2.5@980nm ≤ 1.0@1550nm	≤ 2.1@980nm ≤ 1.5@1060nm	≤ 0.3 @1550nm
Bend ing- loss	Φ20mm (dB/tum)	980nm	-	-	-	≤ 0.02	-	-
		1550nm	-	-	-	≤ 0.05	-	≤ 0.05
	Φ30mm (dB/tum)	980nm	-	-	≤ 0.01	-	-	-
		1550nm	-	-	≤ 0.08	-	-	-
Numerical Aperture			0.13	0.14	0.16	0.20	0.14	0.13
Core Diameter (μm)			3.8	4.2	4.7	3.8	5.6	9
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
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
Cladding Non-circularity (%)			≤ 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
Proof Test Level (kpsi)			100 or 200	100 or 200	100 or 200	100 or 200	100 or 200	100 or 200
Operating Temperature (°C)			-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85

Specifications-2

Fibre Type			CS980_80-16/165	CS980_80-20/165	CS1060_80-14/165	CS1310_125-16/250	CS1310_80-16/165	CS1550_80-18/165
Part No.			CS1015-F	CS1015-D	CS1016-C	CS1011-A	CS1011-B	CS1018-B
Operating Wavelength (nm)			980/1550	980/1550	980/1060/1550	1310/1550	1310/1550	1550
Cutoff Wavelength (nm)			930 ± 40	930 ± 40	930 ± 40	1240 ± 50	1240 ± 50	1450 ± 50
Mode-field Diameter (μm)			5.0 ± 0.5@980nm 7.5 ± 0.5@1550nm	4.0 ± 0.5@980nm 6.5 ± 0.5@1550nm	5.9 ± 0.5@980nm 6.2 ± 0.5@1060nm	6.4 ± 0.5@1310nm 7.2 ± 0.5@1550nm	6.4 ± 0.5@1310nm 7.2 ± 0.5@1550nm	6.3 ± 0.5@1550nm
Attenuation (dB/km)			≤ 2.5@980nm ≤ 1.0@1550nm	≤ 2.5@980nm ≤ 1.0@1550nm	≤ 2.1@980nm ≤ 1.5@1060nm	≤ 0.75@1310nm ≤ 0.5@1550nm	≤ 0.75@1310nm ≤ 0.5@1550nm	≤ 0.5 @1550nm
Bend ing- loss	Φ20mm (dB/tum)	980nm	-	≤ 0.02	-	-	-	-
		1310nm	-	-	-	≤ 0.01	≤ 0.01	-
		1550nm	-	≤ 0.05	-	≤ 0.01	≤ 0.01	≤ 0.01
	Φ30mm (dB/tum)	980nm	≤ 0.01	-	-	-	-	-
1550nm		≤ 0.08	-	-	-	-	-	
Numerical Aperture			0.16	0.2	0.14	0.16	0.16	0.18
Core Diameter (μm)			4.7	3.8	5.6	6.0	6.0	5.8
Cladding Diameter (μm)			80.0 ± 1.0	80.0 ± 1.0	80.0 ± 1.0	124.7 ± 0.5	80.0 ± 1.0	80.0 ± 1.0
Coating Diameter (μm)			165.0 ± 5.0	165.0 ± 5.0	165.0 ± 5.0	240.0 ± 5.0	165.0 ± 5.0	165.0 ± 5.0
Cladding Non-circularity (%)			≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Core/Cladding Concentricity (μm)			≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.3	≤ 0.5	≤ 0.5
Proof Test Level (kpsi)			100 or 200	100 or 200	100 or 200	100 or 200	100 or 200	100 or 200
Operating Temperature (°C)			-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 to +85