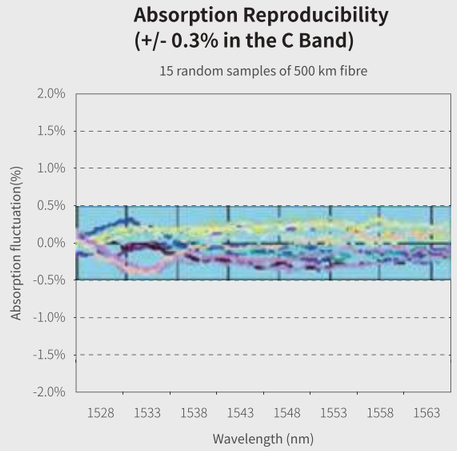
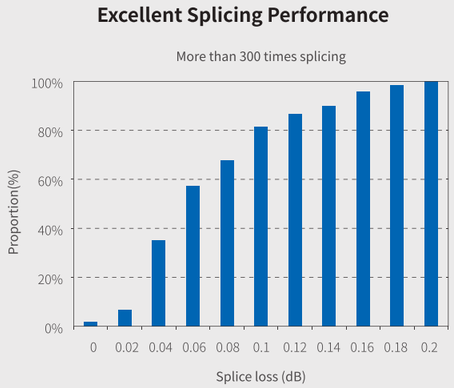
Erbium Doped Fibre (EDF)

YOFC offers full series of Erbium doped fibres, which could meet the most stringent amplifier requirements both for C-Band and L-Band. Through 1480nm or 980nm pump technology, YOFC erbium doped fibre can realize 35nm amplification bandwidth, and maintain flatness gain to get ideal power conversion efficiency. YOFC erbium doped fibres are specially designed for high performance, low noise requirements amplifier, for example: optical preamplifier, booster and in-line amplifier in the WDM communication system. YOFC Erbium doped fibre has been optimized through co-doping with Erbium and Aluminum technology to ensure the high quality performance.



Characteristics

- Excellent spectral uniformity
- High power conversion efficiency and low noise design
- Industry leading fibre geometry
- Low PMD
- DLPC9 dual-layer coating to ensure excellent mechanical properties
- Good performance of anti-hydrogen loss
- Lower splice loss



Application

For the Telecommunication Industry

- DWDM amplifiers
- CATV amplifiers
- 980nm or 1480nm pumps
- Terrestrial and Submarine telecommunications
- Defense/Military/Aerospace

Products

Fibre Type	EDF3/6/125-23	EDF7/6/125-23	EDF13/6/125-23	EDF22/6/125-23	EDF36/6/125-23
Part No.	ED1011-A	ED1012-A	ED1013-A	ED1015-A	ED1016-A
Absorption Peak Coefficient at 1532 nm (Max. [1530 – 1534 nm])					
Specified Value	2~4 dB/m	4~9 dB/m	10~15 dB/m	19~25 dB/m	32~40 dB/m
Typical	3 dB/m	7 dB/m	13 dB/m	22 dB/m	36 dB/m
Application	C Band	C Band	C & L Band	C & L Band	C & L Band

Specifications

Fibre Type	EDF3/6/125-23	EDF7/6/125-23	EDF13/6/125-23	EDF22/6/125-23	EDF36/6/125-23
Part No.	ED1011-A	ED1012-A	ED1013-A	ED1015-A	ED1016-A
Optical Properties					
*Absorption Peak 1532nm (Max.[1530~1534 nm]) Specified Value (dB/m)	2 ~ 4	4 ~ 9	10 ~ 15	19 ~ 25	32 - 40
*Absorption Peak 1532nm (Max.[1530~1534 nm]) Typical (dB/m)	3	7	13	22	36
Absorption Reproducibility (%) (250m)	⩽ 2.5	⩽ 2.5	⩽ 2.5	⩽ 2.5	⩽ 2.5
Background Attenuation(Min.[1100~1300 nm]) (dB/km)	⩽ 10	⩽ 10	⩽ 10	⩽ 10	⩽ 10
Background Attenuation(Min.[1100~1300 nm]) Typical (dB/km)	⩽ 6	⩽ 6	⩽ 6	⩽ 6	⩽ 6
Macro-bend Induced Attenuation (100 m, 15 mm diameter, λ< 1620 nm) (dB)	⩽ 0.1	⩽ 0.1	⩽ 0.1	⩽ 0.1	⩽ 0.1
*Cutoff Wavelength (nm)	⩽ 1300	⩽ 1300	⩽ 1300	⩽ 1300	⩽ 1300
*MFD 1550 nm (μm)	5.4 ± 0.7	5.4 ± 0.7	5.4 ± 0.7	5.4 ± 0.7	5.4 ± 0.7
NA	0.23 ± 0.02	0.23 ± 0.02	0.23 ± 0.02	0.23 ± 0.02	0.23 ± 0.02
Splicing Loss (with G.652 at 1300 & 1700 nm) (dB)	⩽ 0.2	⩽ 0.2	⩽ 0.2	⩽ 0.2	⩽ 0.2
PMD (100 m) (ps)	⩽ 0.25	⩽ 0.25	⩽ 0.25	⩽ 0.25	⩽ 0.25
Geometrical Properties					
Cladding Diameter (μm)	125.0±1.0	125.0±1.0	125.0±1.0	125.0±1.0	125.0±1.0
Coating Diameter (μm)	250.0±7.0	250.0±7.0	250.0±7.0	250.0±7.0	250.0±7.0
Core/Cladding Concentricity (μm)	⩽ 0.6	⩽ 0.6	⩽ 0.6	⩽ 0.6	⩽ 0.6
Cladding/Coating Concentricity (μm)	⩽ 12.5	⩽ 12.5	⩽ 12.5	⩽ 12.5	⩽ 12.5
Mechanical Properties					
Proof Test (kpsi)	100	100	100	100	100
Delivery Length (± 5 m)(m)	250, 500, 1000	250, 500, 1000	250, 500, 1000	250, 500, 1000	250, 500, 1000
Environmental Properties					
Storage Temperature (°C)	-40~+75	-40~+75	-40~+75	-40~+75	-40~+75
Operating Temperature Range (°C)	-5~ +75	-5~ +75	-5~ +75	-5~ +75	-5~ +75
Storage Humidity (Non Condensing)(%)	5 ~ 95	5 ~ 95	5 ~ 95	5 ~ 95	5 ~ 95
Operating Humidity (Non Condensing)(%)	5 ~ 95	5 ~ 95	5 ~ 95	5 ~ 95	5 ~ 95

- Other values available on request
- Cutoff wavelength below 980 nm on request
- Larger MFD about ED1012-A on request

Iso Gain™ Series EDF

Fibrecore company IsoGain™ series EDF includes different gain performance and cutoff wavelengths in response to different types of optical fibre amplifiers(EDFA).

Fibrecore supplies low absorption coefficient fibre for C band amplifier and high absorption coefficient fibre for L band amplifier.

High cutoff wavelength(HC)fibre has large core diameter, which helps to reduce the nonlinear effect and improve the efficiency of the pump with higher power.

Fibrecore company IsoGain™ series EDF's core part is carefully designed and has a substantially flat wavelength gain curve, which can be matched with other leading Erbium-doped fibres.

Supported by Fibrecore's GainMaster™ simulation software.

Advantages

- High efficiency core component
- Optimized high cutoff wavelength used for high efficiency pump EDFA
- L Band amplifiers Small/Micro C Band EDFA High absorption fibre
- Provide a wide range of absorption values for EDFA design optimization

Relative Products

- I-4(980/125) used for high efficiency C band EDFA
- I-4(980/125)HC used for high efficiency, high power C band EDFA
- I-4(980/125)HP used for high efficiency, high power C band EDFA
- I-6(980/125) used for high efficiency C band EDFA high absorption EDF
- I-12(980/125) used for short segment C/L band EDFA with medium absorption fibre
- I-12(980/125)HC used for higher power, short segment C/L band EDFA with high cutoff wavelength medium absorption fibre
- I-15(980/125)HC used for higher power, short segment C/L band EDFA with high cutoff wavelength/high absorption fibre
- I-25(980/125) used for short segment L band EDFA high absorption fibre
- I-25H(1480/80) used for small/micro EDFA with a small diameter and 80μm cladding, high cutoff wavelength, high absorption fibre

Other Relative Products

- MetroGain™ series EDF
- Double-cladding Er-doped/ Yb-doped Fibre (CP1500Y)
- GainMaster™ simulation tool

Technical Parameters

High Efficiency C Band EDF

Fibre Type	I-4(980/125)	I-4(980/125)HC	I-4(980/125)HP	I-6(980/125)
Part No.	ED1018-A	ED1018-B	ED1018-C	ED1018-D
Cut-off Wavelength (nm)	870~970	1000~1320	1100~1320	870~970
NA	0.22~0.24	0.22~0.24	0.19~0.22	0.22~0.24
MFD@1550nm(μm)	5.4~6.6	5.2~5.8	5.7~6.6	5.5~6.3
Absorption Peak@1531nm Specified Value(dB/m)	5.0~6.7	7.7~9.4	7.7~9.4	7.2~8.4
Proof Test (kpsi)	100	100	100	100
Attenuation@1200nm (dB/km)	≤10	≤10	≤10	≤10
Ploarization Mode Dispersion(ps/m)	≤0.005	≤0.005	≤0.005	≤0.005
Cladding Diameter (μm)	125±1	125±1	125±1	125±1
Core Concentricity (μm)	≤0.3	≤0.3	≤0.3	≤0.3
Coating Diameter (μm)	245±15	245±15	245±15	245±15
Coating Type	Dual-layer UV-Acrylate	Dual-layer UV-Acrylate	Dual-layer UV-Acrylate	Dual-layer UV-Acrylate
Operating Temperature (°C)	-55 ~ +85	-55 ~ +85	-55 ~ +85	-55 ~ +85

L Band & C Band EDF

Fibre Type	I-12(980/125)	I-12(980/125)HC	I-15(980/125)HC	I-25(980/125)
Part No.	ED1019-A	ED1019-B	ED1019-C	ED1019-D
Cut-off Wavelength (nm)	900~970	1200~1320	1200~1320	900~970
NA	0.21~0.23	0.23~0.26	0.23~0.26	0.23~0.26
MFD@1550nm(μm)	5.7~6.6	5.0~5.5	4.8~5.4	5.2~6.3
Absorption Peak@1531nm Specified Value(dB/m)	14~21	17~21	27~33	35~45
Proof Test (kpsi)	100	100	100	100
Attenuation@1200nm (dB/km)	≤10	≤10	≤10	≤10
Ploarization Mode Dispersion(ps/m)	≤0.005	≤0.005	≤0.005	≤0.005
Cladding Diameter (μm)	125±1	125±1	125±1	125±1
Core Concentricity (μm)	≤0.3	≤0.3	≤0.3	≤0.3
Coating Diameter (μm)	245±15	245±15	245±15	245±15
Coating Type	Dual-layer UV-Acrylate	Dual-layer UV-Acrylate	Dual-layer UV-Acrylate	Dual-layer UV-Acrylate
Operating Temperature (°C)	-55 ~ +85	-55 ~ +85	-55 ~ +85	-55 ~ +85

Small Diameter EDF for Small/Micro EDFA

Fibre Type	I-25H(1480/80)
Part No.	ED1020-A
Cut-off Wavelength (nm)	900~1025
NA	≥0.30
MFD@1550nm(μm)	3.8~4.7
Absorption Peak@1531nm Specified Value(dB/m)	23~27
Proof Test (kpsi)	100
Attenuation@1200nm (dB/km)	≤30
Ploarization Mode Dispersion(ps/m)	≤0.005
Cladding Diameter (μm)	80±1
Core Concentricity (μm)	≤0.5
Coating Diameter (μm)	160±10
Coating Type	Dual-layer UV-Acrylate
Operating Temperature (°C)	-55 ~ +85