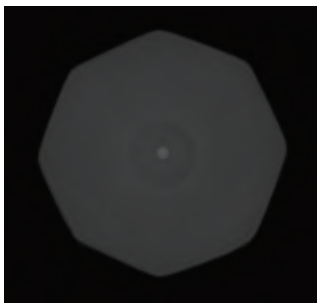
Double-clad Ytterbium Doped Fibre(YDF)

YOFC double-clad ytterbium doped fibre (YDF) is one kind of active fibre applied for 1 micrometer fibre optical amplifier and fibre laser. Laser made by fibre cavity is extensively used in areas as military, material processing and scientific research. Fibre laser is widely used for its advantages of lightness, efficiency and stability, which are competitively alternative to solid state laser.



Characteristics

- Precise geometry
- High Ytterbium doped concentration
- Low NA core, LMA designed
- High laser slope efficiency
- Low photo-darkening
- Stable storage and operate in extreme atmosphere

Application

- CW/Pulse fibre laser and amplifier
- Military, Industry, Medical
- Material processing
- Fibre laser source

Specifications

Fibre Type	YDF_DC 10/125	YDF_DC 20/125	YDF_DC 20/400	YDF_DC 25/250	YDF_DC 30/250	YDF_DC 30/400
Part No.	YD1110-A	YD1110-B	YD1110-C	YD1110-D	YD1110-E	YD1110-F
Geometrical Properties						
Core Diameter (μm)	10.5±1.0	19.5±1.5	20.0±2.0	25.0±2.5	30.0±3.0	30.0±3.0
Cladding Diameter (flat-to-flat) (μm)	125±3.0	125±3.0	400.0±15.0	250.0±10.0	250.0±10.0	400.0±10.0
Coating Diameter (μm)	245.0±15.0	245.0±15.0	550.0±20.0	400.0±20.0	400.0±20.0	550.0±20.0
Inner Clad Shape	Octagon					
Optical Properties						
Operating Wavelength (Yb^{3+}) (nm)	1030~1115	1030~1115	1030~1115	1030~1115	1030~1115	1030~1115
Background Attenuation @1200nm (dB/km)	＜30	＜30	＜30	＜30	＜30	＜30
Cladding Pump Absorption @915nm (dB/m)	1.6±0.3	3.6±0.3	0.4±0.05	1.6±0.2	2.0±0.2	0.6±0.1
Core NA	0.08±0.01	0.08±0.01	0.06±0.01	0.06±0.01	0.06±0.01	0.06±0.01
Inner Cladding NA	⩾0.46	⩾0.46	⩾0.46	⩾0.46	⩾0.46	⩾0.46
Proof Test (kpsi)	100	100	100	100	100	100
Coating Material	Low Index Polymer					