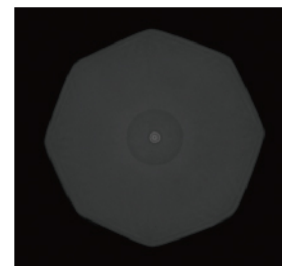


Double-cladding Ytterbium-doped Fiber

Everfoton's Double-cladding Ytterbium Doped Fiber is an active optical fiber used in 1 μm fiber lasers. Lasers made with the fiber cavity can be widely used in material processing, medical care, and scientific research. Fiber lasers are widely used for their lightweight, high efficiency, and stability compared with traditional solid-state lasers.



Characteristics

- The large preform process guarantees precise geometric control and batch stability
- High ytterbium-doped concentration
- High laser slope efficiency
- Low photo-darkening
- High reliability coating

Applications

- Industry/ Medical
- CW / Pulse fiber laser
- High peak-power / High average-power fiber laser

Specifications-1 (Low and Medium Energy Pulse Series)

Fiber Type	YDF_DC 10/125	YDF_DC 20/125	YDF_DC 23/130	YDF_DC 25/250	YDF_DC 30/250
Part No.	YD1110-A	YD1110-B	YD1111-A	YD1110-D	YD1110-E
Geometrical Properties					
Core Diameter (μm)	10.0±1.0	20.0±1.0	23.0±1.0	25.0±3.0	30.0±2.0
Cladding Diameter (flat-to-flat) (μm)	125.0±3.0	125.0±3.0	130.0±3.0	250.0±5.0	250.0±5.0
Coating Diameter (μm)	245.0±15.0	245.0±15.0	245.0±15.0	400.0±15.0	400.0±15.0
Inner Cladding Shape	Octagon				
Optical Properties					
Operating Wavelength (Yb ³⁺) (nm)	1030~1115				
Cladding Attenuation @1200nm (dB/km)	≤30.0	≤30.0	≤30.0	≤30.0	≤30.0
Cladding Pump Absorption @915nm (dB/m)	1.7±0.4	4.0±0.5	4.1±0.5	2.0±0.4	2.0±0.4
Core NA	0.08±0.01	0.08±0.01	0.070±0.005	0.065±0.010	0.06±0.050
Inner Cladding NA	≥0.46	≥0.46	≥0.46	≥0.46	≥0.46
Proof Test (kpsi)	≥100	≥100	≥100	≥100	≥100
Inner Coating Material	Low Refractive Index Coating				

Specifications-2 (High Energy Pulse Series)

Fiber Type	YDF_DC 50/400	YDF_DC 100/400(A2)	YDF_DC 100/400(A6)	YDF_DC 200/360	YDF_DC 300/540	YDF_DC 400/650
Part No.	YD1110-U	YD1110-M	YD1110-N	YD1110-T	YD1110-O	YD1110-K
Geometrical Properties						
Core Diameter (μm)	50.0±2.0	100.0±5.0	100.0±5.0	200.0±7.0	300.0±6.0	400.0±10.0
Cladding Diameter (flat-to-flat) (μm)	400.0±10.0	400.0±10.0	400.0±10.0	360.0±10.0	540.0±10.0	650.0±10.0
Coating Diameter (μm)	550.0±15.0	550.0±15.0	550.0±15.0	525.0±20.0	650.0±20.0	800.0±20.0
Inner Cladding Shape	Octagon					
Optical Properties						
Operating Wavelength (Yb³⁺) (nm)	1030~1115					
Cladding Attenuation @1200nm (dB/km)	≤30.0	≤30.0	≤30.0	≤30.0	≤25.0	≤20.0
Cladding Pump Absorption @915nm (dB/m)	2.5±0.5	2.0±0.5	6.0±1.0	2.5±0.4	1.5±0.5	3.0±0.5
Core NA	0.065±0.005	0.10±0.01	0.10±0.01	0.12±0.01	0.12±0.01	0.11±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
Inner Coating Material	Low Refractive Index Coating					

Specifications-3 (Continuous Wave Series)

Fiber Type	YDF_DC 14/250	YDF_DC 20/250	YDF_DC 20/400	YDF_DC 25/400	YDF_DC 30/400	YDF_DC 34/400
Part No.	YD1110-H	YD1110-L	YD1110-C	YD1110-J	YD1110-F	YD1110-F
Geometrical Properties						
Core Diameter (μm)	14.0±1.0	20.0±2.0	20.0±1.0	25.0±2.0	30.0±3.0	34.0±2.0
Cladding Diameter (flat-to-flat) (μm)	250.0±5.0	250.0±5.0	400.0±10.0	400.0±10.0	400.0±10.0	400.0±10.0
Coating Diameter (μm)	400.0±15.0	400.0±15.0	550.0±15.0	550.0±15.0	550.0±15.0	550.0±15.0
Inner Cladding Shape	Octagon					
Optical Properties						
Operating Wavelength (Yb³⁺) (nm)	1030~1115					
Cladding Attenuation @1200nm (dB/km)	≤30.0	≤20.0	≤30.0	≤30.0	≤30.0	≤30.0
Cladding Pump Absorption @915nm (dB/m)	0.7±0.15	1.0±0.2	0.40±0.10	0.60±0.1	0.60±0.1	0.75±0.25
Core NA	0.070±0.005	0.06±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
Inner Coating Material	Low Refractive Index Coating					

Specifications-4 (Continuous Wave Series)

Fiber Type	YDF_DC 34/600	YDF_DC 50/600	YDF_DC 50/800
Part No.	YD1110-Q	YD1110-R	YD1110-S
Geometrical Properties			
Core Diameter (μm)	34.0±2.0	50.0±3.0	50.0±3.0
Cladding Diameter (flat-to-flat) (μm)	600.0±10.0	600.0±10.0	800.0±10.0
Coating Diameter (μm)	750.0±50.0	750.0±50.0	970.0±50.0
Inner Cladding Shape	Octagon		
Optical Properties			
Operating Wavelength (Yb ³⁺) (nm)	1030~1115		
Cladding Attenuation @1200nm (dB/km)	≤30.0	≤30.0	≤30.0
Cladding Pump Absorption @915nm (dB/m)	0.60±0.10	0.80±0.20	0.60±0.10
Core NA	0.065±0.005	0.065±0.005	0.065±0.005
Inner Cladding NA	≥0.46	≥0.46	≥0.46
Proof Test (kpsi)	≥100	≥100	≥100
Inner Coating Material	Low Refractive Index Coating		