

Yb Doped Fibers

For fiber amplifiers and lasers @ 1μm

Our company offers a large choice of Ytterbium single and double clad optical fibers to address a variety of laser performance requirements.

iXblue's Ytterbium doped fibers have been designed to provide low noise and high optical conversion efficiency in fiber lasers and amplifiers..

Key Features

- High pump and consistent absorption
- Low M²
- High efficiency

Applications

- 1 μm CW and pulsed lasers
- 1 μm pre-amplifiers

Related Products

- Associated fiber bragg mirrors
- Matching passive fiber



Main Specifications for Yb single clad fibers

Product Name	Core Diameter (μm)	Core NA	Core absorption @ 915 nm (dB/m)	Core absorption @ 975 nm (dB/m)*	Background @ 1184 nm (dB/km)	Cut-off wavelength (nm)	MFD @ 1060 nm (μm)
IXF-YDF-6-125	6 +/- 1	0.12	70 +/- 5	> 200	< 50	< 1000	7 +/- 1
IXF-YDF-7-125	7 +/- 1	0.11	25 +/- 5	> 80	< 50	< 1000	7.5 +/- 1
Polarization Maintaining Fibers:							
IXF-YDF-PM-5-125	5 +/- 1	0.13	25 +/- 5	> 80	< 50	860 +/- 70	6.5 +/- 1
IXF-YDF-PM-6-125	6 +/- 1	0.12	75 +/- 5	> 250	< 50	< 1030	7 +/- 1

* calculated from 915 nm absorption value

Common specifications

- Cladding diameter (μm): 125 +/- 1
- Core/Clad concentricity (μm): < 0.5
- Coating diameter (μm): 245 +/- 15
- Coating/Clad offset (μm): < 5
- Proof test level (kpsi): 100

Main Specifications for Yb double clad fibers

Product Name	Core diameter (μm)	Core NA	Clad absorption @976nm (dB/m)	Clad absorption @915nm (dB/m)	Cladding diameter Flat/Flat (μm)	Coating diameter (μm)
IXF-2CF-Yb-O-6-130	6 +/- 0.5	0.14	2.1 +/- 0.5	0.6 +/- 0.15	125 +/- 3	245 +/- 15
IXF-2CF-Yb-O-6-130-PF	6 +/- 0.5	0.20	≥ 5.2	≥ 1.30	125 +/- 3	245 +/- 15
IXF-2CF-Yb-O-8-130-PF	8 +/- 0.5	0.09	> 8.0	1.8 +/- 0.4	125 +/- 3	245 +/- 15
IXF-2CF-Yb-O-10-130	10 +/- 1	0.10	5.2 +/- 1.5	1.5 +/- 0.5	125 +/- 3	245 +/- 15
IXF-2CF-Yb-O-11-130-CL	11 +/- 1	0.08	5.0 +/- 0.6	1.3 +/- 0.2	125 +/- 3	245 +/- 15
IXF-2CF-Yb-O-20-130-NL	20 +/- 1	0.07	22 +/- 2.5	5.5 +/- 0.6	125 +/- 3	245 +/- 15
Polarization Maintaining Fibers:						
IXF-2CF-Yb-PM-6-130	6 +/- 0.5	0.14	2.1 +/- 0.5	0.6 +/- 0.15	125 +/- 3	245 +/- 15
IXF-2CF-Yb-PM-6-130-NH	6 +/- 0.5	0.14	> 3.6	> 0.9	125 +/- 3	245 +/- 15
IXF-2CF-Yb-PM-10-130	10 +/- 1	0.10	5.2 +/- 1.5	1.5 +/- 0.5	125 +/- 3	245 +/- 15
IXF-2CF-Yb-PM-11-130-CL	11 +/- 1	0.08	5.0 +/- 0.6	1.5 +/- 0.2	125 +/- 3	245 +/- 15

- Custom specifications on request

Common specifications

- MM background (dB/km): < 50
- Cladding NA: ≥ 0.46
- Cladding shape: octagonal / round (PM) fiber
- Birefringence: > 2.10⁻⁴ typ / Panda type
- Proof test level (kpsi): 100

Yb Double Clad Cross section files

