

Nd Doped | Fibers

For fiber laser between 890 - 1100 nm

iXblue Photonics offers a complete range of Neodymium fibers with some unique properties.

iXblue Photonics Neodymium Aluminosilicate double clad fibers have been developed to maximize fiber efficiency through a precisely controlled host composition. Compared to a standard Neodymium fiber, the 1.06-micron emission is reduced through careful fiber design optimization. Our double clad fibers are routinely tested to various parameters such as photodarkening and environmental behavior.

A Single clad fiber is also proposed and would be ideal to build seeder sources in the 10xx nm range.

Key Features

- Host composition optimized for high energy efficiency and low clustering
- Low splicing losses
- High NA. High performance low-index cladding
- Low background losses
- Low macrobending losses at operating wavelength

Applications

- 0.9 to 1.064 μm fiber lasers
- Seeder source at 10xx nm

Related Products

- Matching passive fiber
- Associated fiber bragg mirror



Main Specifications for single clad fiber

Product Name	Core diameter (μm)	Core NA	Clad absorption @ 804 nm (dB/m)	Cladding diameter (μm)	Coating diameter (μm)	Mode field diameter @920 nm (μm)
IXF-NDF-3-125-HD	3 +/- 0.5	0.26	150 +/- 20	125 +/- 2	245 +/- 15	3 +/- 0.5

Main Specifications for double clad fibers

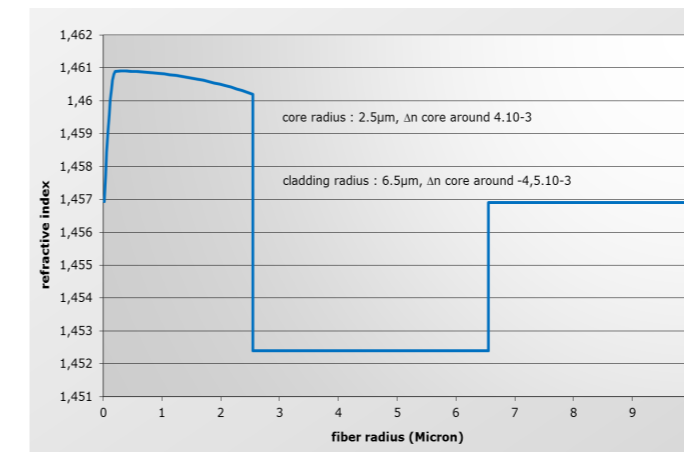
Product Name	Core diameter (μm)	Core NA	Clad absorption @ 800 nm (dB/m)	Cladding diameter (μm)	Coating diameter (μm)	Multimode clad shape
IXF-2CF-ND-O-5-125-D	4 +/- 0.5	0.14	> 0.15	125 +/- 3	245 +/- 15	Octagonal
Polarization Maintaining Fibers:						
IXF-2CF-ND-PM-5-80-W*	5 +/- 0.5	0.16	> 0.35	80 +/- 3	170 +/- 15	Panda
IXF-2CF-ND-PM-20-80-V2	20 +/- 2	0.065	2.3	80 +/- 3	170 +/- 10	Panda

* Associated passive fibers, as well as a fiber combiners adapted to this fiber

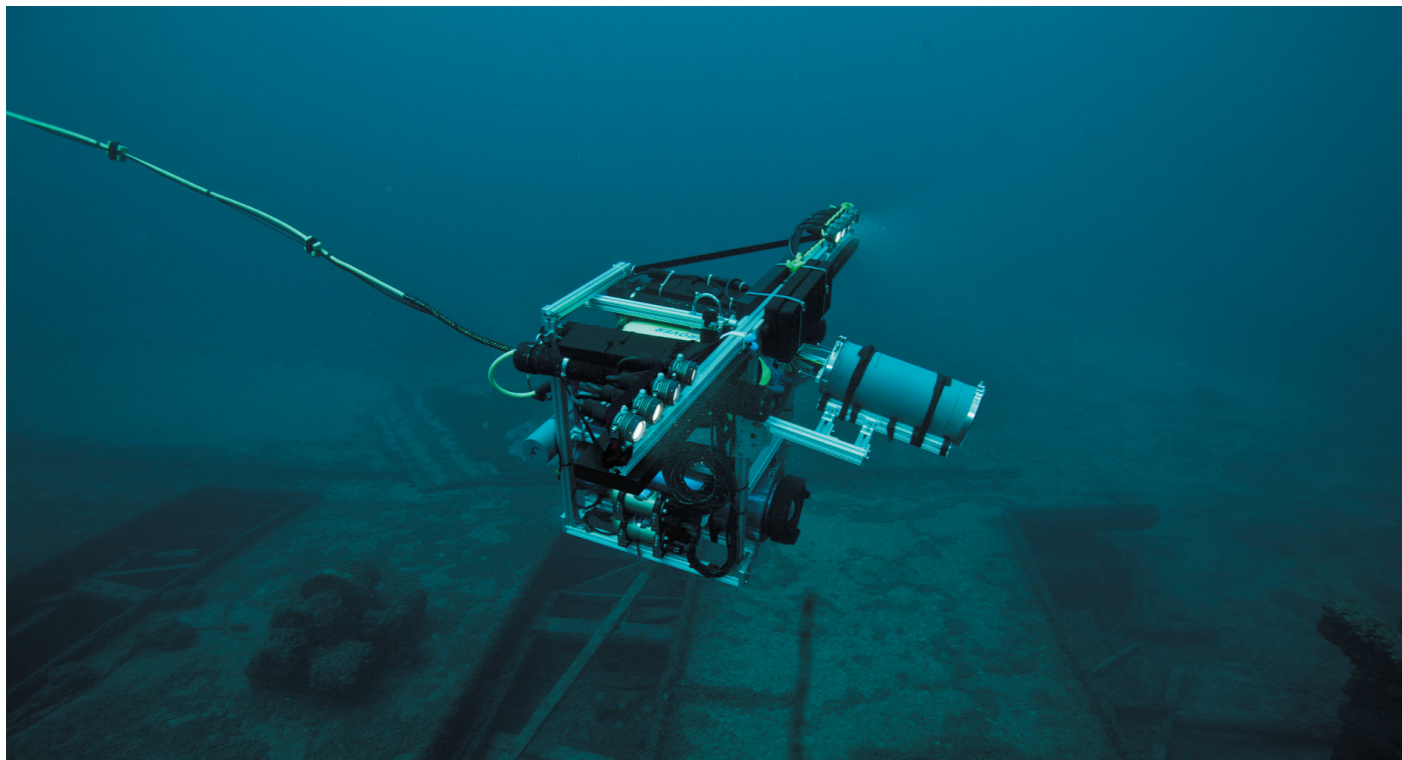
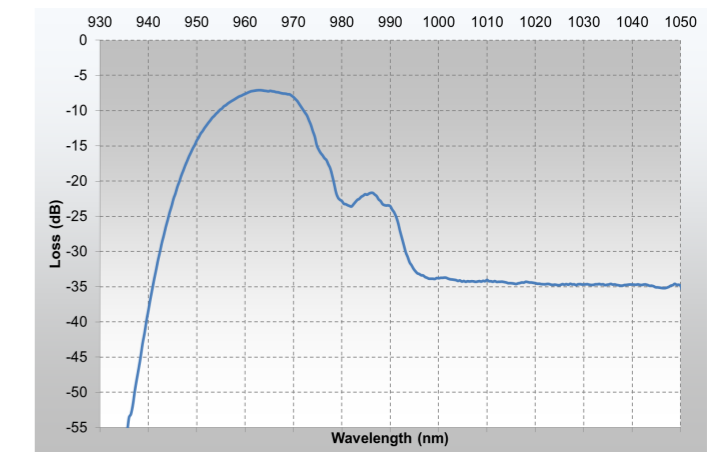
Common specifications

- MM background (dB/km): < 50
- Cladding NA: ≥ 0.46
- Core-clad offset (μm): < 1.0
- Proof test level (kpsi): 100
- LPO1 cutoff wavelength (μm): 1
- Operating wavelength (nm): 900 - 950

Typical Refractive Index Profile



LPO1 cutoff



Matching Fiber Combiner

Product Name	Number of MM port	Pump signal transmission (%)	Signal transmission (%)	PER (dB)	Maximum pump signal power (W)
IXS-COMB-PM-2+1-1-4-80-P*	2	75	93	19	15
IXS-COMB-PM-2-1-1-20-80-P*	2	75	>95	TBC	20

* Panda PM design