PM Neodymium Double Clad Doped Fiber

IXF-2CF-Nd-PM-30-130

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 µm emission is reduced through careful fiber design optimization, making it ideal for lasers between 890 and 935 nm.

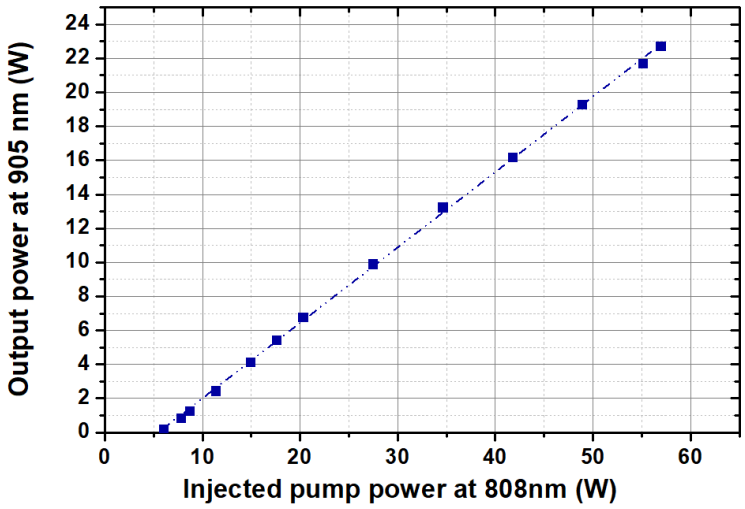
With 30 µm core, the fiber could be used to generate multi-watts in femtosecond lasers configuration in the 0.9 µm area, high enough power to be used in frequency-doubling to generate blue visible lasers, or even frequency-quadrupling to generate Deep-UV lasers at 266 nm. Polarisation Maintening behaviour as well as 0.045 Numerical Aperture simplifies the fiber integration to ensure single mode operation and low M^2 .

FEATURES & BENEFITS

- Low 1.06 µm emission thanks to optimised design
- Panda type
- 30 µm core for multi-watts operation
- Standard 125µm cladding
- 0.045 NA for low M^2
- Matched passive fiber available

APPLICATIONS

- 0.9 µm fiber lasers
- 0.4 µm Blue fiber lasers through frequency-doubling
- 0.2 µm Deep UV fiber lasers through frequency-quadrupling
- CW and femtosecond lasers



IXF-2CF-Nd-PM-30-130 typical efficiency

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IXF-2CF-Nd-PM-30-130 TECHNICAL SPECIFICATIONS

Parameters

Core diameter	30 ± 2 µm
Clad diameter	125 ± 3 µm
Coating diameter	245 ± 15 µm
Core NA	0.045 ± 0.005
Cladding NA	≥ 0.46
Clad absorption @ 808 nm	≥ 0.8 dB/m
Multimode background losses	< 50 dB/km
Birefringence	> 1.10^{-4}
Core-clad offset	< 1.0 µm
Proof test level	100 kpsi

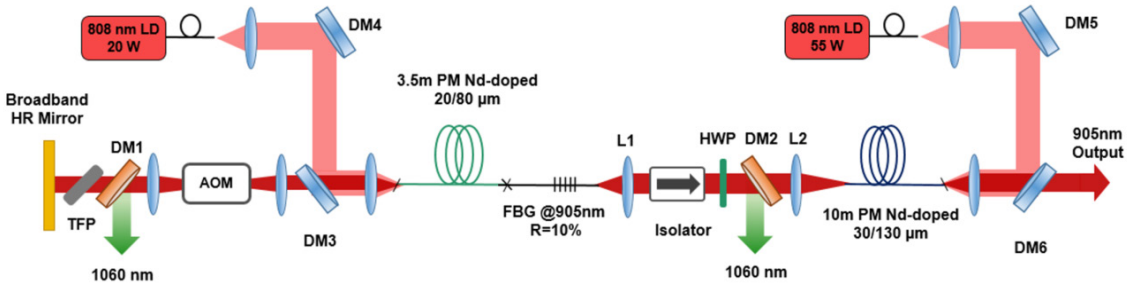
Comments:

Panda PM design
Round cladding shape
Operating wavelength: 890-935 nm
HeNe multimode tested
Matched double clad passive fiber: IXF-2CF-PAS-PM-30-130-0.05

Specifications are subject to change without notice

EXAMPLE OF APPLICATIONS:

IXF-2CF-Nd-PM-30-130 fiber is used in amplifier configuration to increase a 905 nm pulse laser to achieve up to 24 W of average power at a repetition rate of 40 kHz, with pulse duration of 45 ns. Frequency doubling technics was applied to achieve 4.9 W @ 452 nm and frequency quandrupling to obtain 0.5 w @ 226nm.



Reference: iXbue & CIMAP-ENSICAEN

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