

SPECIALTY OPTICAL FIBER

IXF-SUP Series

Supercontinuum Photonic Crystal Fibers

These fibers offer both low dispersion at the pump wavelength, high numerical aperture and are therefore particularly suited for the efficient generation of supercontinuum with ti-sapphire and YAG pulsed pump sources.



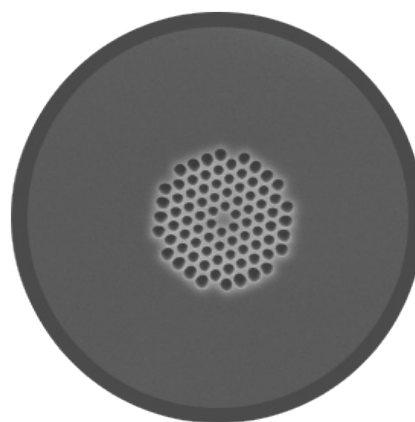
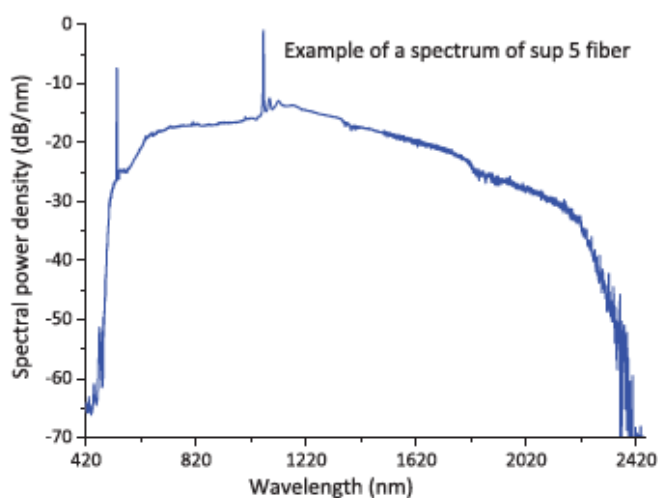
Partnership with **PHOTONICS BRETAGNE**
Product line **PERFAS**

Benefits & Features

- Pure silica core, low background losses
- Small effective area, high nonlinear
- Dispersion optimised for pumping near 780 nm & 1060 nm

Applications

- Supercontinuum generation
- Frequency comb generation



Typical supercontinuum generated in 10m of IXF-SUP-5-125-1050 with 300 mW 1064 nm pulse laser (1.2 ns @ 25 kHz)

PSD-L-Q-E-086 L

IXF-SUP-Series_eof_12122023

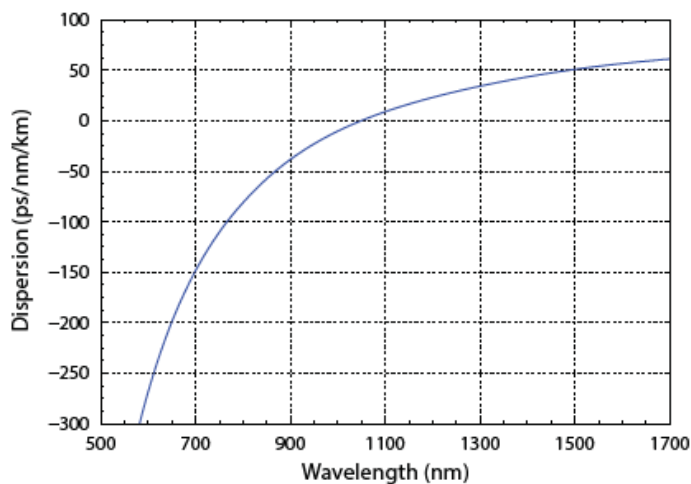
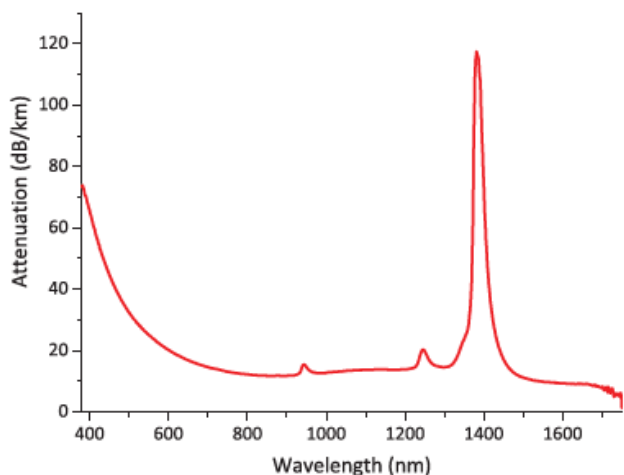
IXF-SUP Series

TECHNICAL SPECIFICATIONS

Parameters

Part Number	IXF-SUP-2-135-760	IXF-SUP-5-125-1050	IXF-SUP-5-125-1050-PM
Material	Silica		
Core diameter (μm)	1.7 ± 0.2	5 ± 0.3	5 ± 0.3
Cladding diameter (μm)	135 ± 5	125 ± 2	125 ± 3
Cladding non-circularity (%)	< 2	< 2	< 7.5
Coating outside diameter (μm)	240 ± 10	245 ± 10	240 ± 10
Coating type	Dual coat high index acrylate		
Zero dispersion wavelength* (nm)	760 ± 15	1050 ± 5	1050 ± 5
Mode field diameter @ ZDW (μm)	1.6 ± 0.2	4.6 ± 0.3	4.5 ± 0.3
Effective area @ ZDW (μm^2)	1.9 ± 0.2	14 ± 2	16 ± 2
Nonlinear coefficient ($\text{W}\cdot\text{km}^{-1}$)	105 ± 10	10 ± 1	10 ± 1
Numerical aperture	0.4 ± 0.05	0.2 ± 0.02	0.2 ± 0.02
Background loss @ ZDW (dB/km)	< 90	< 20	< 20
Background loss @ 1550 nm	N/A	< 15	< 30
Birefringence ($\times 10^{-4}$)	1 ± 0.5	N/A	2.3 ± 0.5

* Zero dispersion wavelength (ZDW)



Typical measured attenuation and dispersion in IXF-SUP-5-125-1050

Exail reserves the right to change, at any time and without notice, the specifications, design, function or form of its products described herein.

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