

Hollow Core Photonic Bandgap Fibers

IXF-HCF

Optical signal in a hollow core photonic bandgap fibre is guided in an air core surrounded by a high air filling factor PBG microstructured region (>90%). Added to the low bend sensitivity due to the core high NA, this confers to this fibre design significantly reduced material nonlinearities since more than 95% of optical power is propagating in air. In addition air/undoped silica provides excellent temperature immunity critical for high performance fibre sensing and metrology applications.



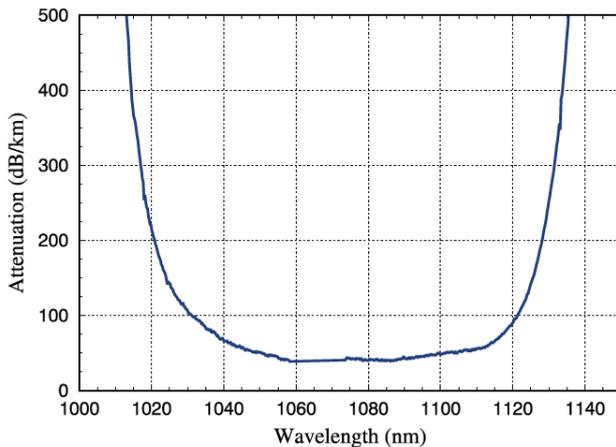
Partnership with **PHOTONICS BRETAGNE**
Product line **PERFOS**

FEATURES & BENEFITS

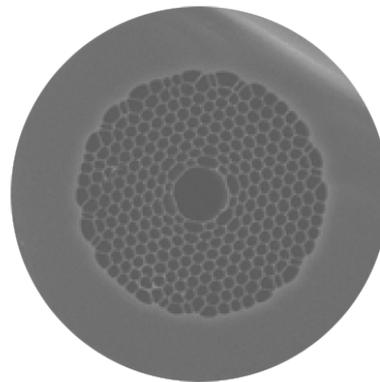
- Air core, ultra-low nonlinear coefficient
- Low background losses
- Low dispersion in the centre of the transmission band

APPLICATIONS

- Power delivery
- Fibre sensors
- Nonlinear applications (pulse compression, shaping)



Typical measured attenuation



IXF-HCF TECHNICAL SPECIFICATIONS

Parameters

P/N: IXF-HCF-	11-80-750	12-85-785	10-100-950	10-110-1060
Center wavelength (nm)	750 ± 10	785 ± 10	950 ± 10	1060 ± 20
Core diameter (µm)	11 ± 1	12 ± 1	10 ± 1	10 ± 1
Cladding diameter (µm)	80 ± 5	85 ± 5	100 ± 5	110 ± 5
Core concentricity error (µm)				< 0.5
Coating outside diameter (µm)				240 ± 10
Coating type	dual coat high index coating			
Minimum attenuation (dB/km)	135	125	125	40
Spectral transmission (nm)	700 - 780	770 - 800	910 - 970	1030 - 1120
Maximum attenuation in transmission window (dB/km)	300	300	200	100
Optical power fraction in core (%)				> 90
Effective modal index				~ 0.99
Mode field diameter (µm)	8.5 ± 1	8.5 ± 1	8 ± 1	8.5 ± 1

Specifications are subject to change without notice