

# 785 nm Hollow Core Photonic Bandgap Fiber

IXF-HCF-12-85-785

Optical signal in a hollow core photonic bandgap fiber 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 fiber 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 fiber sensing and metrology applications.



Partnership with Photonics Bretagne



## BENEFITS & FEATURES

- 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)

## IXF-HCF-12-85-785 TECHNICAL SPECIFICATIONS

Parameter	Unit
Core diameter	12 +/- 1 $\mu\text{m}$
Cladding diameter	85 +/- 5 $\mu\text{m}$
Coating outside diameter	240 +/- 10 $\mu\text{m}$
Material	synthetic silica
Core concentricity error	< 0.5 $\mu\text{m}$
Coating type	dual coat high index coating
Proof test level	75 kpsi
Center wavelength	785 +/- 10 nm
Minimum attenuation	125 dB/km
Spectral transmission window	770 - 800 nm
Maximum attenuation in transmission window	300 dB/km
Optical power fraction in core	> 90 %
Effective modal index	~ 0.99
Mode field diameter	8.5 +/- 1 $\mu\text{m}$

*Specifications are subject to change without notice*