

MICROSTRUCTURED FIBERS HOLLOW CORE PHOTONIC BANDGAP FIBER

光可以在光子晶体光纤空心的空气中被导引传输，因而可提供许多有前途的应用，如低损耗波导、高功率传输、对光纤弯曲引入的损耗不敏感。空气导引的光子晶体光纤几乎对弯曲不敏感（即使是小弯曲直径）、具有极端的色散特性、高度依赖波导元件。如果将合适的气体、液体填充在空心中心，光子晶体光纤可用于传感应用和非线性光学。

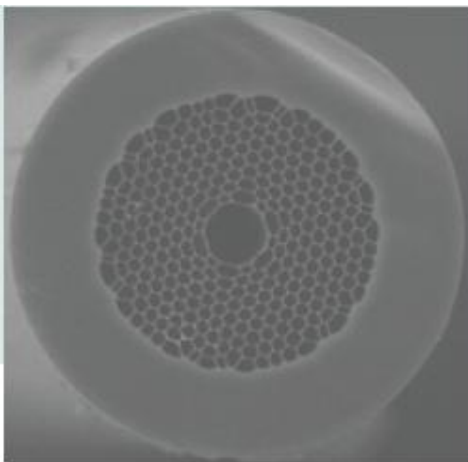
主要特征：

- 空心、超低非线性系数
- 低背景损耗
- 传输波段处低色散

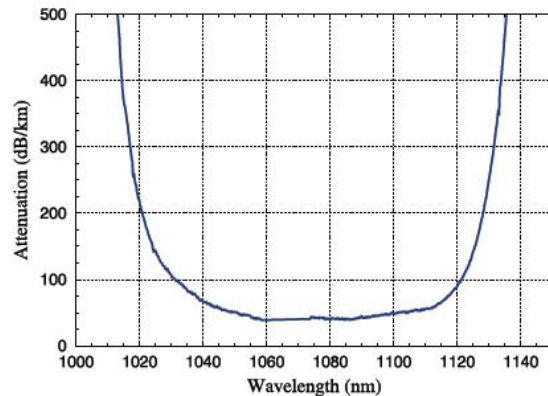
典型应用：

- 光束传输
- 光纤传感
- 非线性应用（压缩、整形）

Fiber type	HCF-11-80-785	HCF-10-90-950	HCF-10-110-1060
Optical parameters			
Center wavelength (nm)	785 +/- 15	950 +/-10	1060 +/- 10
Minimum attenuation (dB/km)	125	105	40
Spectral transmission window (nm)	750 - 800	900 - 990	1030 - 1120
Maximum attenuation in transmission window (dB/km)	260	215	80
Optical power fraction in core	>90%	>90%	>90%
Effective modal index	~ 0.99	~ 0.99	~ 0.99
Mode field diameter (μm)	7.1 +/- 1	7.5 +/- 1	7.6 +/- 1
Physical/Material parameters			
Fibre material	synthetic silica		
Core concentricity error (μm)	< 0.5		
Core diameter (μm)	11 +/- 1	10.5 +/- 1	10 +/- 1
Cladding diameter (μm)	80 +/- 5	90 +/- 5	110 +/- 5
Coating outside diameter (μm)	240 +/- 10		
Coating type	dual coat high index coating		
Proof test level (kpsi)	75		



Typical measured attenuation



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