NL-PM-750

Nonlinear Photonic Crystal Fiber

Highly Nonlinear · Single Mode · Polarization Maintaining

- Small mode field area
- High nonlinear coefficient
- Zero dispersion in visible wavelength range

Photonic crystal fibers use a microstructured cladding region with air holes to guide light in a pure silica core, giving rise to novel functionalities.

This single mode nonlinear photonic crystal fiber combines a very small effective mode field area (2 µm²) and zero dispersion (around 750 nm) to allow efficient supercontinuum generation with 800 nm pump sources. Furthermore the fiber is polarization maintaining for increased efficiency.

The fiber is available with hermetically sealed ends and FC/PC connectors. It could also be spliced to standard single mode fiber or large mode area PCF.

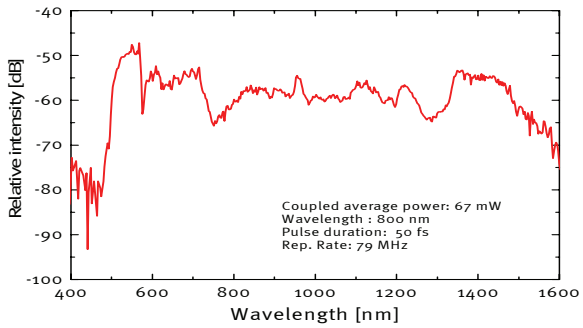
Applications

- Supercontinuum generation

Physical properties	
Material	Pure Silica
Cladding diameter	120 ± 5 µm
Coating diameter	240 ± 10 µm
Coating material, single layer	Acrylate
Core diameter	1.8 ± 0.3 µm

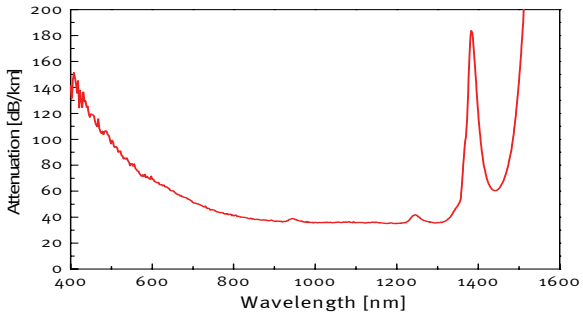
Optical properties	
Short Zero dispersion wavelength	750 ± 15 nm
Long Zero dispersion wavelength	1260 ± 20 nm
Attenuation @ 780 nm	<0.05 dB/m
Cut-off wavelength	<650 nm
Mode field diameter @ 780 nm	1.6 ± 0.3 µm
Numerical aperture @ 780 nm	0.38 ± 0.05
Nonlinear coefficient @ 780 nm	~ 95 $(Wkm)^{-1}$
Birefringence @ 780 nm	$>3\cdot10^{-4}$

Typical Supercontinuum Output

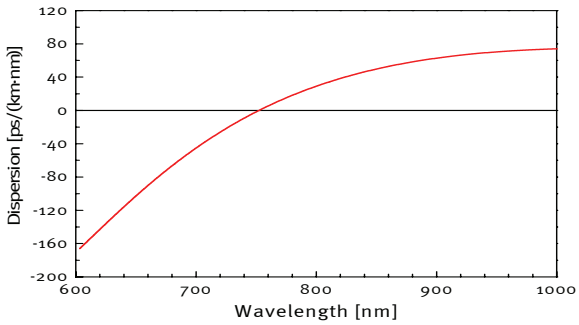


Supercontinuum spectrum obtained in 2 m NL-PM-750 fiber. For general guidelines on supercontinuum generation, ask for our application note

Typical spectral attenuation



Typical measured dispersion



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