

Nonlinear photonic crystal fibers

NL-PM-750 / SC-5.0-1040 / SC-5.0-1040-PM

- Small mode field area
- High nonlinear coefficient
- Zero dispersion near pump wavelength

These single mode nonlinear photonic crystal fibers combine a very small effective mode field area and low/zero dispersion to allow efficient supercontinuum generation with 800 nm and 1064 nm pump sources. These fibers are ideal for applications like frequency comb generation.

For easy supercontinuum generation using 800nm range femtosecond lasers, see also our femtoWHITE modules.

Applications

- Supercontinuum generation



Specifications

Optical

Model	NL-PM-750	SC-5.0-1040	SC-5.0-1040-PM
Short zero dispersion wavelength	750 ± 15 nm	1040 ± 15 nm	1040 ± 15 nm
Long zero dispersion wavelength	1270 ± 30 nm	NA	NA
Mode field diameter (1/e ²)	1.6 ± 0.3 μm @ 780 nm	4.2 ± 0.2 μm @ 1064 nm	4.3 ± 0.2 μm @ 1064 nm
Numerical aperture	0.38 ± 0.05 @ 780 nm	0.20 ± 0.05 @ 1064 nm	0.20 ± 0.05 @ 1064 nm
HOM cut-off wavelength	< 650 nm	< 1000 nm	< 1000 nm
Birefringence	> 3·10 ⁻⁴ @ 780 nm	NA	> 1.7·10 ⁻⁴ @ 1060 nm
Attenuation	< 50 dB/km @ 780 nm	< 3 dB/km @ 1064 nm	< 3 dB/km @ 1064 nm

Physical

Material	Pure silica		
Cladding diameter	120 ± 5 μm	125 ± 3 μm	125 ± 3 μm
Coating diameter	240 ± 10 μm	244 ± 10 μm	244 ± 10 μm
Coating material	Single layer acrylate		

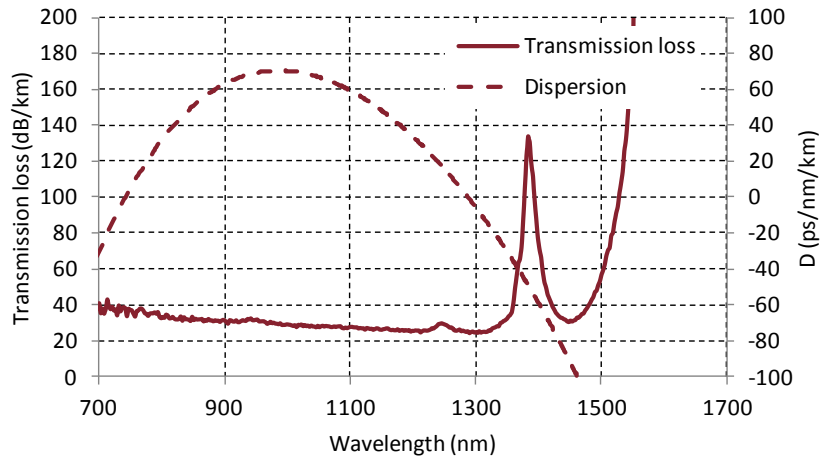
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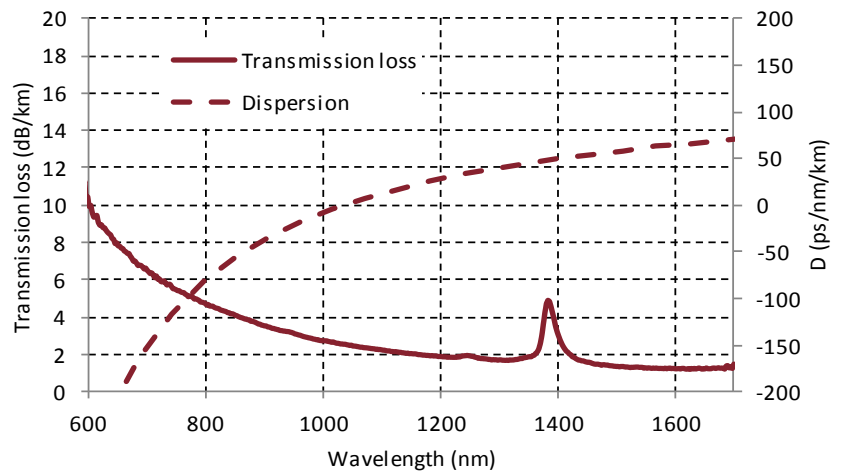
In case the work with the nonlinear fiber leads to a publication, NKT Photonics must be mentioned in the publication as supplier of the nonlinear fiber.

Typical measured dispersion and attenuation

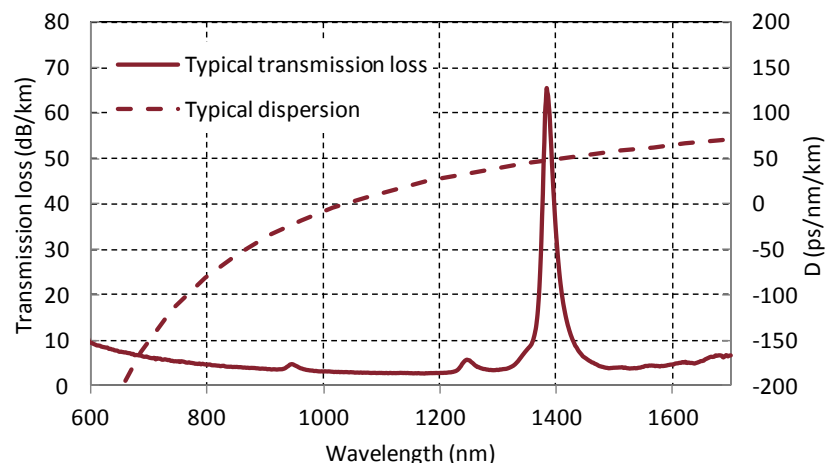
NL-PM-750



SC-5.0-1040



SC-5.0-1040-PM



See also

- Our range of turnkey supercontinuum lasers
- Our **application notes** for using these fibers for supercontinuum generation

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All NKT Photonics products are produced under our quality management system certified in accordance with the ISO 9001:2015 standard.

