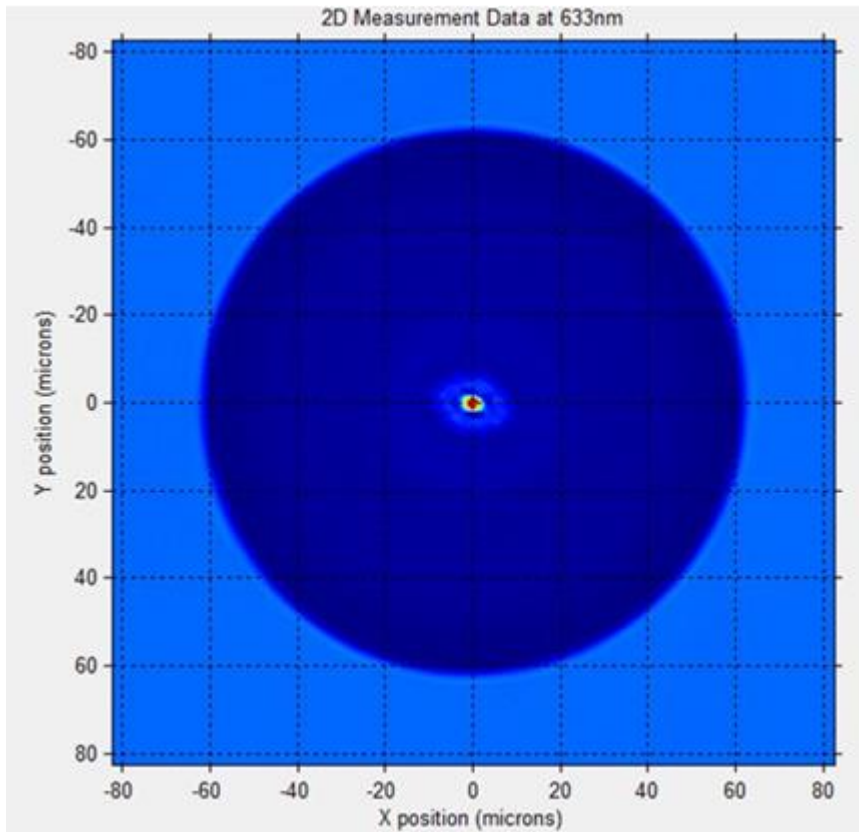


Type:	Polarization maintaining, normal dispersion fiber for the 1500-2000 nm spectral range	REV: 1.0
Date:	14/11/2023	MK
Modification:		

Photonics

Polarization maintaining, normal dispersion fibers for the 1500-2000 nm spectral range



ECF2000K (Elliptical Core 2000 nm Fiber, Kerf-oriented) is a unique optical fiber with normal and flattened chromatic dispersion profile in a wide spectral range, covering the 1500-2000 nm band. The fiber is polarization-maintaining, with high effective birefringence. Since the birefringence is of geometrical origin it is maintained even if the fiber is stressed and bent, which often might be a concern when operating more typical PM fibers intended for this spectral range. The optical axes are marked with auxiliary kerfs in the glass cladding outline, which are easily recognized by most standard PM splicers, typically using predefined splicing programs. The fiber can be conveniently spliced also with the standard Panda-type fibers, and the splices are low-loss and with high PER values. Amongst other application, the fiber finds use in ultrashort pulsed fiber lasers generating femtosecond pulses in the spectral range of 1500-2000 nm and fiber optic pulse amplifiers and stretchers.

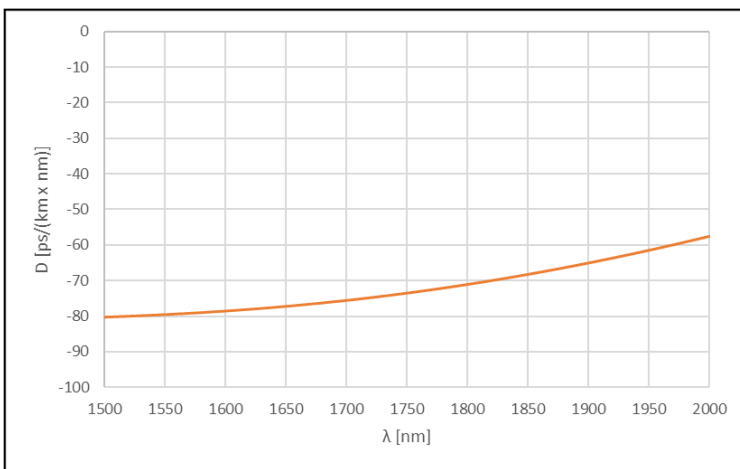


Fig.1 Typical chromatic dispersion profile.

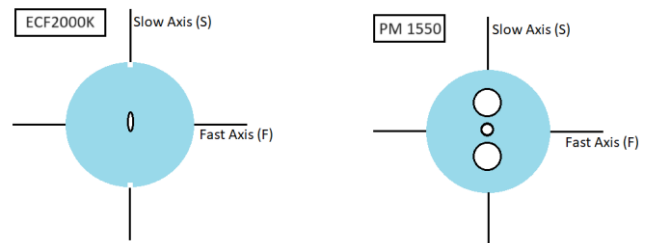


Fig.2 Aligning birefringence axes with Panda axes.

Type:	Polarization maintaining, normal dispersion fiber for the 1500-2000 nm spectral range	REV: 1.0
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Photonics

APPLICATIONS

- ✓ Fiber lasers, amplifiers and stretchers
- ✓ LIDAR
- ✓ Measuring devices
- ✓ Fiber optic sensors
- ✓ Medical applications

ADVANTAGES & FEATURES

- ✓ All-normal dispersion (ANDi)
- ✓ Dispersion-flattened fiber with a much reduced dispersion slope
- ✓ Truly polarization-maintaining
- ✓ Reduced nonlinearities thanks to larger MFD
- ✓ Easy splicing and handling

TECHNICAL SPECIFICATIONS:

Geometrical Parameters	Value
Core Diameter [μm]	3.48 x 1.79
Cladding Diameter [μm]	125 ± 1
Coating Diameter [μm]	242 ± 15
Optical Parameters	Value
Operating Wavelength [nm]	1500-2000
¹ Mode Field Diameter [μm] @ 1550 nm	4.15 ± 0.5
² Numerical Aperture @ 1550 nm	0.38
Cut-Off Wavelength [nm]	1250 ± 50
Maximum attenuation at 1550 nm [dB/km]	16.5
Maximum attenuation at 2020 nm [dB/km]	26.0
Chromatic Dispersion [ps/km · nm] @ 1550 nm	-80 ± 5
Chromatic Dispersion [ps/km · nm] @ 2000 nm	-57 ± 5
Beat length [mm] @ 1550 nm	2.7
Beat length [mm] @ 1860 nm	4.3
³ H-parameter [1/m] @ at room temperature	< 2.5 · 10 ⁻⁵

¹ Mode Field Diameter determined from the near field intensity distribution by the „4sigma” definition.

² Numerical aperture at 1% cutoff from the transformed „4sigma” definition.

³ Fiber wound on a spool 236 x 173 mm (flange Ø x width).

PACKAGING:

Spool type depending on fiber length.

ORDERING INFORMATION:

Series	Quality	Fiber type	Spectral operating range [nm]	Cladding diameter [μm]	Coating diameter [μm]	Color	Spool type (flange Ø x width) [mm]
FBR	G0	ECF2000K	1520 – 1500-2000	125	250	NT – neutral	1 – 236 x 173
						BK – black	2 – 264 x 180
						BL – blue	3 – 190 x 39
						GR – green	4 – 160 x 39
						e.t.c.	5 – 128 x 41

Important notice

Buyer and/or user of this product has to make sure before using this product that it is suitable for the intended use. All questions of liability relating to this product are subject – in accordance with the prevailing – to the Term of Sale of the selling Fibrain subsidiary.