

New: PM PCF Broadband Fiber Cables PCF-P-5

Polarization-maintaining, endlessly single-mode, photonic crystal fibers series PCF-P-5 with Gaussian intensity profile

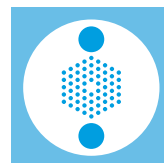


FEATURES

Polarization-maintaining, endlessly single-mode, photonic crystal fiber cables series PCF-P-5 with Gaussian intensity profile and low-stress fiber connectors with end caps.

- Broadband fiber with wavelength range 370 nm - 1550 nm
- PCF fiber with 5 μm core, pure silica
- End caps for a smaller power density at the fiber end-faces and a sealed microstructure
- Measured values for fiber NA: NAe^2
- Mode-field diameter almost independent of wavelength
- Fiber patch cable with $\varnothing 900 \mu\text{m}$ buffer or as $\varnothing 3 \text{ mm}$ cable with Kevlar strain-relief
- Connectors type FC with 0°-polish or 8°-polish
- Polarization axis is indicated by connector index key (slow axis)
- Optionally: Amagnetic titanium connectors for connectors of type FC PC or FC APC

- Polarization-maintaining PCF Fiber



DESCRIPTION

Polarization-maintaining, endlessly single-mode, photonic crystal fiber cables series PCF-P-5 with Gaussian intensity profile and low-stress fiber connectors with end caps.

Fiber

The fiber is a [polarization-maintaining](#), endlessly single-mode PCF fiber, categorized by its core diameter (in this case 5 μm). The mode-field diameter MFD is almost independent of wavelength. The effective numerical NA_{eff} is wavelength dependent and is measured for each connectorized fiber and various wavelengths by Schäfter+Kirchhoff. The special broadband fiber has an operational wavelength range of 370 nm to 1550 nm.

Fiber Cable

The fiber length can be customer-specified (there is a [minimum fiber length](#)). The polarization-maintaining PCF [fiber cables](#) are offered as Ø 900 μm buffer in black, or a Ø 3 mm cable in black with Kevlar strain-relief.

Fiber Connectors

For each fiber end the fiber [connector type](#) can be chosen (FC PC with 0°-polish or FC APC with 8°-polish). The fiber connectors of type FC assembled by Schäfter+Kirchhoff have an alignment index (key), wide key (standard).

End Caps

The fiber connectors of all PCF fiber cables are equipped with an [end cap](#). This means that a short piece of coreless fiber (< 300 μm) is spliced onto the polarization-maintaining PCF fiber. The end cap seals the microstructure of the fiber and allows for an easy cleaning of the end-face. Additionally it also reduced the power density at the fiber end-face.

Amagnetic fiber connectors

For FC PC or FC APC type connectors [amagnetic versions](#) completely made of titanium can be selected. Those connectors have a ceramic ferrule.

New! Contact us for more information and availability!

TECHNICAL DATA

New: PM PCF Broadband Fiber Cables
PCF-P-5

Order Code	PCF-P-5
Fiber type	PCF, polarization-maintaining, endlessly single-mode
Wavelength min.	370 nm
Wavelength max.	1550 nm
Nominal MFD (@532 nm)	4.2 \pm 0.5 μm
Core diameter	5.0 \pm 0.5 μm
PER	\geq 18 dB (typ. \geq 21 dB)

Effective fiber NAe ²	0.075 (@780 nm) ± 0.005, wavelength dependent
Fiber connector type	FC PC or FC APC with end caps
End cap length	230 ± 50 µm
Core and cladding material	Pure silica
Bend radius min.	80 mm
Cable length	100 - 1000 cm ± 10 cm
Cable	Ø 900 µm buffer or Ø 3 mm cable with Kevlar strain relief

All values are preliminary

TECHNOTES

- [Photonic crystal fiber cables PCF](#)
[Details about the specific features of PCF fibers.](#)
- [Numerical Aperture / Effective Numerical Aperture](#)
[Why is it best to define an effective numerical aperture NAe²?](#)
- [Mismatch / NA Mismatch and Overlap](#)
[Overlap and coupling efficiency when using fibers of different NA, different Mode field or different focal lengths](#)
- [Polarization-maintaining Fibers \(PM Fibers\)](#)
[Why are some fibers polarization-maintaining?](#)
- [Characterizing Polarization-maintaining Fibers \(PM Fibers\)](#)
[How to characterize PM fibers.](#)
- [High Power Phenomena](#)
[Stimulated Brillouin Scattering and fiber end-face effects](#)
- [End cap fibers](#)
[What are end caps and why should I use them?](#)
- [Fiber Patch Cable Types](#)
[Details on the structure of 3 mm and 900 µm fiber cables.](#)
- [Fiber Connector Options](#)
[FC, AVIM and E2000](#)
- [Amagnetic fiber connectors](#)
[Special features of titanium connectors](#)
- [Connecting single-mode and PM fibers to a fiber coupler](#)
[How to correctly insert a fiber into the receptacle of a fiber coupler](#)

ACCESSORIES

**POLARIZATION
ANALYZER SK010PA**

Measurement tool for coupling into polarization-maintaining fiber cables

**BULKHEAD FIBER
ADAPTERS**

Fiber Adapters without Optics

FCCT01

Fiber connector cleaning tool

RELATED PRODUCTS

**NEW: FIBER CABLES
PCF-P**

Polarization-maintaining, endlessly single-mode, photonic crystal fibers series PCF-P with Gaussian intensity profile

**FIBER CABLES PMC-
RGB**

Polarization-maintaining fiber cables, broadband, 400 nm - 680 nm

FIBER CABLES PMC

Polarization-maintaining fiber cables

**RGB LASER BEAM
COUPLERS SERIES
60SMS**

for coupling into single-mode and polarization-maintaining fiber cables

**RGB FIBER
COLLIMATOR SERIES
60FC**

for collimating radiation exiting an optical fiber or as an incoupler

This is a printout of the page <https://sukhamburg.com/products/details/PCF-P-5> from 5/13/2024

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