

New: Single-mode PCF Broadband Fiber Cables PCF-S-5

Endlessly single-mode, photonic crystal fibers series PCF-S-5 with Gaussian intensity profile

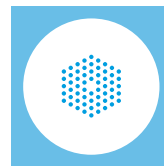


FEATURES

Endlessly single-mode, photonic crystal fiber cables series PCF-S-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
- Optionally: Amagnetic titanium connectors for connectors of type FC PC or FC APC

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- Single-mode PCF Fiber



DESCRIPTION

Endlessly single-mode, photonic crystal fiber cables series PCF-S-5 with Gaussian intensity profile and low-stress fiber connectors with end caps.

Fiber

The fiber is an 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_{e2} 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 single-mode 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 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: Single-mode PCF Broadband Fiber Cables
PCF-S-5

Order Code	PCF-S-5
Fiber type	PCF, endlessly single-mode
Wavelength min.	370 nm
Wavelength max.	1550 nm
Nominal MFD (@532 nm)	4.5 \pm 0.5 μm
Core diameter	5.0 \pm 0.5 μm
Effective fiber NA _{e2}	0.070 (@780 nm) \pm 0.005, wavelength dependent
Fiber connector type	FC PC or FC APC with end caps
End cap length	230 \pm 50 μm
Core and cladding material	Pure silica

Bend radius min.	80 mm
Cable length	100 - 1000 cm \pm 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 \$NA_{eff}\$?](#)
- [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

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-S-5> from 5/2/2024

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