

60FC-PD-Q852Z-4-F60

with a power monitor and circular state of polarization



FEATURES

Schäfter+Kirchhoff fiber collimator type 60FC-PD-Q852Z-4-F60 has an integrated power monitor. It additionally has an integrated quarter-wave plate in order to generate a circular state of polarization

- Input polarizer
- Power monitor
- Design wavelength 852 nm
- Effective focal lengths f' 60 mm
- Circular state of polarization
- Gaussian Beam profile
- Clear aperture \varnothing 21 mm
- Receptacle for fiber connectors type FC APC
- Compatible with the multicube™ system
- Rugged and compact design
- A front-fitting for attachments, such as a iris diaphragm

DESCRIPTION

The fiber collimator type 60FC-PD-Q852Z-4-F60 has an integrated power monitor and additionally an integrated quarter-wave plate in order to generate a circular state of polarization.

Optical design

The radiation of a polarization-maintaining input fiber is collimated to a beam with a diameter in the range \varnothing 1 - 4 mm. A polarizer suppresses radiation guided falsely in the fast axis of the polarization-maintaining fiber. Now a beam splitting plate directs approx. 1.5 % of the radiation to a photodiode. In the transmitted beam, a quarter-wave plate changes the state of polarization from linear to left-handed or to right-handed circular polarization. Finally the beam is expanded to the desired beam diameter.

Adjustment of focus

All fiber collimators of series 60FC-PD-Q are aligned for the specified wavelengths.

In case of need you can change the distance between fiber end-face and the first collimating optics by means of an eccentric key. The lens does not rotate when adjusting the focus. The final focus setting is locked by means of two radially arranged clamping screws. Additionally attachment optics can be mounted to the front of the collimator.

Optimum lens performance

The angled polish of connectors of type APC is considered by a [pre-angled mechanical coupling axis](#) that compensates the beam deflection and you can use the lens centrally. This minimizes aberrations simply resulting from a non-ideal beam path through the lens.

Connector Type

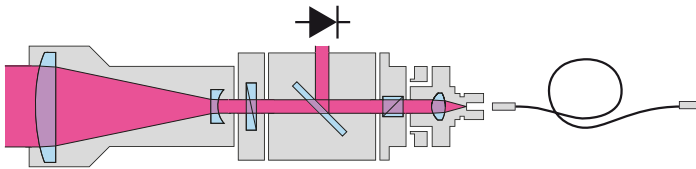
The fiber collimator is equipped with a type FC APC receptacle. An additional grub screw fixes the spring loaded ferrule of the fiber connector in order to increase pointing stability.

Material

The fiber collimators are made of nickel silver, black anodized aluminum and stainless steel.

Mounting

The collimators series 60FC-PD-Q all are compatible to the multicube™ system (microbench or cage system).

**TECHNICAL DATA**

60FC-PD-Q852Z-4-F60

Type	60FC-PD-Q
Order Code	60FC-PD-Q852Z-4-F60
Design wavelengths	852 nm
Eff. focal lengths	60 mm
Numerical aperture	0.18
Clear aperture	Ø 21 mm
Input polarizer	10,000 : 1

Power monitor	approx. 2:98
Photodiode	BPX-61 (SMA)
Quarte-wave plate	Zero-order, adjustable
Elements/Groups	10/6
Alignment wavelength	852 nm
Fiber connection	FC APC
Outer diameter	Ø 32/34.5 mm
Total length	176 mm
Material	Nickel silve, black anodized aluminum and stainless steel
Weight	550 g

DOWNLOADS



[980241100513.pdf \(Dimensional drawing\).](#)

ACCESSORIES

**ATTACHMENT OPTICS
SERIES 25** to attach in the front of collimators with M27x0.5
thread

RELATED PRODUCTS

**POLARIZATION
ANALYZER SK010PA** Measurement tool for coupling into polarization-
maintaining fiber cables

FIBER CABLES PMC Polarization-maintaining fiber cables

This is a printout of the page <https://sukhamburg.com/products/details/60FC-PD-Q852Z-4-F60> from 5/3/2024

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