60FC-E-Q780-4-F57x114

Fiber collimator for an ellipical beam cross section with a circular state of polarization

FEATURES

Fiber collimator for an ellipical beam cross section with a circular state of polarization

- Effective focal lengths f' 57 x 114 mm
- Aspect ratio 1:2
- Integrated quarter-wave plate
- Designed and adjusted for the wavelength 780 nm
- Clear aperture Ø 29 mm
- Receptacle for fiber connectors type FC APC

DESCRIPTION

The fiber collimator generates a collimated beam with an elliptical cross section and a circular state of polarization. It is suitable for polarization-maintaining fiber cables and leads to a collimated beam with a Gaussian intensity profile and an elliptical beam cross section with an axis ratio of 1:2.

The effective focal lengths are f' 57 x 114 mm.
The state of polarization is circular and can be left-handed or right-handed.

Optical design
The radiation of the fiber is collimated to a beam with a diameter in the range Ø 1 - 4 mm. In this collimated beam a low-order quarter-wave plate changes the state of polarization from linear to left-handed or to right-handed circular. An adjacent anamorphic beam shaping optics transforms the circular beam into a beam with an elliptical cross section. Finally the beam is expanded to the desired diameter.

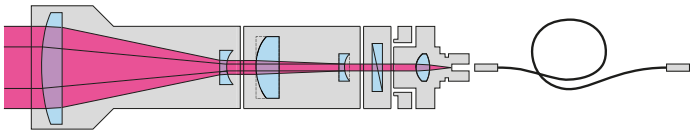
Adjustment of focus
All fiber collimators of seris 60FC-E are aligned for the specified wavelength.In case of need you can change the distance between fiber end-face and the first collimating optics by means of an eccentric key. The lens does not rotate when adjusting the focus in both cases. The final 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 centrically. 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 receptacles. An additional grub screw fixes the spring loaded ferrule of the fiber connector in order to increase pointing stability.

Housing material
The fiber collimators are made of nickel silver and black anodized aluminum.

Mounting
The collimators series 60FC-E all posses a flange for low-strain mounting e.g. using the clamp collars series CC.



TECHNICAL DATA

60FC-E-Q780-4-F57x114

Type	60FC-E
Order Code	60FC-E-Q780-4-F57x114
Eff. focal lengths	57 x 115 mm
Aspect ratio	1 : 2
Quarter-wave plate	Low-order
Clear aperture	29 mm
Elements/Groups	8/5
Wavelength range	750 - 980 nm
Alignment wavelength	780 nm
Fiber connection	FC/APC
Outer diameter	Ø 45/49 mm

Total length	196 mm
Material	Nickel silver and black anodized aluminum
Weight	

DOWNLOADS

980241100307.pdf (Dimensional drawing)

RELATED PRODUCTS

POLARIZATION ANALYZER SK010PA	Measurement tool for coupling into polarization-maintaining fiber cables
FIBER CABLES PMC	Polarization-maintaining fiber cables
60FC-E-4-F57X114-780	Fiber collimator for an ellipical beam cross section

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