1650nm long-distance collimating lens

Product Description

The fiber output can be collimated and shaped for different laser outputs from fiber connections, providing diffraction-limited performance at the designed wavelength with collimation distances up to 200 meters. The design of this series of collimating lenses is compact and unaffected by misalignment. During design, image aberration correction is applied, and a double-lens series with air spacing is chosen for excellent collimation

performance. The effective focal length of the double-lens is wavelength-dependent. Therefore, this series of collimating lenses should be used at the designed wavelength for optimal performance.

Product features

Fiber Collimator with FC/APC, FC/PC, or SMA 905Connectors、 Usable for wavelength range from 405 nm to 1.55 μm、 Simplifies free-space laser-to-fiber coupling、 Double-lens design with aberration correction

Part Number

MP-CLM-1650-14.5-0.14-S

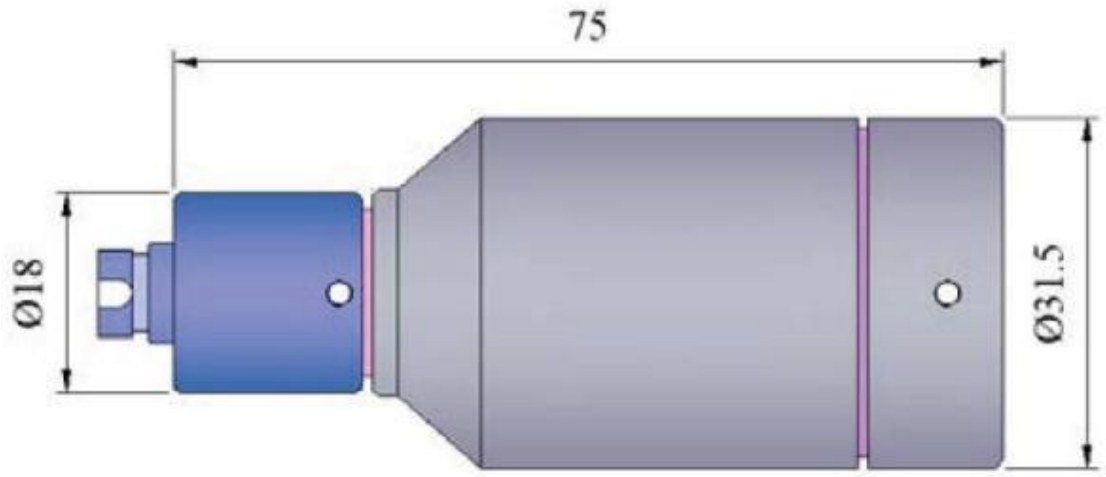
Application area

Free-space optical communication | LiDAR | Natural gas detection | Remote sensing | Aerospace

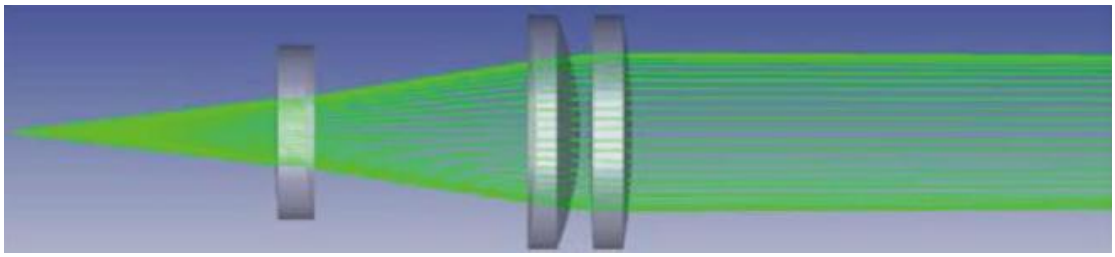
Core parameters

Center Wavelength	Beam Waist Diameter	Effective Focal Length
1650nm	14.5mm	76.0mm

- **Dimension Drawing**



- **General Parameters**



Beam waist spot diameter: Taken at the $1/e^2$ point of the Gaussian beam, calculated using the theoretical value for single-mode fiber at each wavelength.

Far-field divergence angle of the beam: The input uses single-mode fiber for each wavelength, with the divergence angle calculated according to the theoretical value of a Gaussian beam at the $1/e^2$ point.

Tolerance: + 0.01° / 0.0°

Technical Parameters

Central Wavelength	Bandwidth	Beam Waist Diameter (at $1/e^2$)	Beam Divergence Angle (Far Field)	Effective Focal Length	Numerical Aperture (Lens)	Fiber Type	Transmittance
405nm	±30nm	10.2mm	0.09mrad	66.5mm	0.19	405HP	>92%
450nm	±30nm	13.7mm	0.07mrad	68.4mm	0.18	405HP	>92%
520nm	±30nm	14.2mm	0.06mrad	70.3mm	0.18	460HP	>92%
635nm	±30nm	14.5mm	0.07mrad	72.1mm	0.17	630HP	>92%
780nm	±30nm	14.2mm	0.07mrad	73.3mm	0.17	780HP	>92%
850nm	±30nm	14.9mm	0.07mrad	73.7mm	0.17	780HP	>92%
905nm	±30nm	14.9mm	0.07mrad	73.9mm	0.17	980HP	>92%
980nm	±30nm	15.0mm	0.09mrad	74.2m	0.17	980HP	>92%

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1064nm	±30nm	15.2mm	0.09mrad	74.5mm	0.17	980HP	>92%
1310nm	±30nm	12.9mm	0.12mrad	75.1mm	0.17	SMF-28e	>92%
1550nm	±30nm	14.2mm	0.14mrad	75.6mm	0.17	SMF-28e	>92%
1650nm	±30nm	14.5mm	0.14mrad	76.0mm	0.17	SMF-28e	>92%