



# Adjustable Focus Aspheric Fiber Collimator

## 650-1050nm (Focal Length 4.5mm Beam Waist Diameter 0.98 FC/APC)



### ● Product Description

The design uses springs to assemble a suitable optical lens inside the mechanical part, which is used for the collimator output of the optical fiber beam and can also be used for fiber-to-fiber coupling. By rotating the sleeve outside the collimator, the internal optical lens can be translated forward and backward along the optical axis, thereby adjusting the distance between the lens and the end face of the optical fiber to obtain different spot sizes.



## ● Product features

Three AR-coated aspheric lens options: 350- 700nm, 650-1050nm, 1050-1620nm 、 Use with compatible connectors to achieve diffraction-limited performance 、 Alignment error during adjustment <math><15\text{mrad}</math>

## ● Part Number

MP-CLM-NIR-0.98-PA

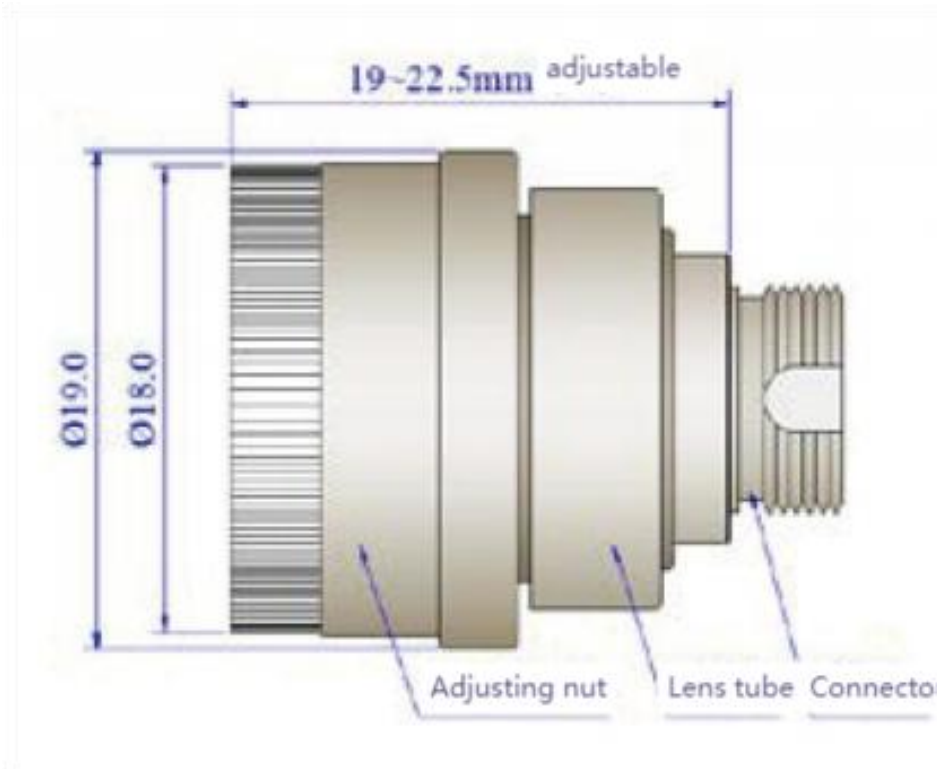
## ● Application area

Fiber Laser Systems | Optical Communication & Sensing | Industrial Inspection | Medical Equipment | Scientific Optical Platforms

## ● Core parameters

| Wavelength | Focal Length | Beam Waist Diameter |
|------------|--------------|---------------------|
| 650-1050nm | 4.5mm        | 0.98                |

## ● Dimension Drawing



## ● General Parameters

F=4.5m adjustable focus aspheric collimator

| Focal length | NA   | Waist diameter | Lens coating wavelength | Far-field divergence angle of collimated light beam | Maximum waist distance | Input Fiber MFD | Distance from optical fiber to lens | Connector Type  | Transmittance |
|--------------|------|----------------|-------------------------|---|------------------------|-----------------|-------------------------------------|-----------------|---------------|
| 4.5m         | 0.54 | 0.86           | 400~700nm<br>R<0.5%     | 0.045°  | 530mm                  | 3.5μm           | 2.4-4.9mm                           | FC/PC<br>FC/APC | >90%          |



| 4.5m   | 0.5 |                | 650~10                  |   |                        |                 |                                     |                 |               |
|--|-----|----------------|-------------------------|---|------------------------|-----------------|-------------------------------------|-----------------|---------------|
| m  | 4   | 0.98           | 50nm                    | 0.062°  | 453mm                  | 5μm             | 2.4-4.9                             |                 |               |
|  |     |                | R<0.5%                  |   |                        |                 | mm                                  |                 |               |
| 4.5m   | 0.5 |                | 1050~1                  |   |                        |                 |                                     |                 |               |
| m  | 4   | 0.87           | 700nm                   | 0.12°   | 194mm                  | 10.4            | 2.4-4.9                             |                 |               |
|  |     |                | R<0.5%                  |   |                        | μm              | mm                                  |                 |               |
| <b>F=7.5m adjustable focus aspheric collimator</b> |     |                |                         |   |                        |                 |                                     |                 |               |
| focal length                                       | NA  | Waist diameter | Lens coating wavelength | Far-field divergence angle of collimated beam | Maximum waist distance | Input Fiber MFD | Distance from optical fiber to lens | Connector Type  | Transmittance |
| 7.5m   | 0.3 | 1.35           | 400-700nm               | 0.027°  | 1435mm                 | 3.5μm           | 4.2-6.8                             |                 |               |
|  |     |                | R<0.5%                  |   |                        | m               | mm                                  |                 |               |
| 7.5m   | 0.3 | 1.6            | 650~10                  | 0.038°  | 1225mm                 | 5μm             | 4.2-6.8                             | FC/PC<br>FC/APC | >90%          |
|  |     |                | 50nm                    |   |                        |                 | mm                                  |                 |               |
|  |     |                | R<0.5%                  |   |                        |                 |                                     |                 |               |
| 7.5m   | 0.3 | 1.44           | 1050~1                  | 0.08°   | 521mm                  | 10.4            | 4.2-6.8                             |                 |               |
|  |     |                | 700nm                   |   |                        | μm              | mm                                  |                 |               |
|  |     |                | R<0.5%                  |   |                        |                 |                                     |                 |               |



| F=11mm adjustable focus aspheric collimator |         |                |                         |   |                        |                 |                                     |                 |               |
|---|---------|----------------|-------------------------|---|------------------------|-----------------|-------------------------------------|-----------------|---------------|
| focal length                                | NA Lens | Waist diameter | Lens coating wavelength | Far-field divergence angle of collimated light beam | Maximum waist distance | Input Fiber MFD | Distance from optical fiber to lens | Connector Type  | Transmittance |
| 11mm  | 0.3     | 1.96           | 400-700nm<br>R<0.5%     | 0.018°  | 3080mm                 | 3.5μm           | 8.6- 10.9 mm                        | FC/PC<br>FC/APC | >90%          |
| 11mm  | 0.3     | 2.35           | 650~1050nm<br>R<0.5%    | 0.026°  | 2631mm                 | 5μm             | 8.6-10.9 mm                         |                 |               |
| 11mm  | 0.3     | 2.1            | 1050-1700nm<br>R<0.5%   | 0.055°  | 1115mm                 | 10.4 μm         | 8.6-10.9 mm                         |                 |               |