

# **Single mode fiber achromatic collimator**

## **1310nm (beam waist spot diameter 2.91mm**

### **FCAPC)**



- **Product Description**

Composed of a large numerical aperture lens system, it can use multimode optical fibers with larger numerical apertures. The beam emitted from the multimode fiber can be shaped, or the spatial plane beam can be coupled into the multimode fiber to achieve good collimation and spot shape over long distances.

- **Product features**

Achromatic design optimization; multimode fiber compatibility; enhanced thermal stability design; precise waist spot control; high power and reliability

- **Part Number**

MP-CLM-1310-2.91-0.036-SA

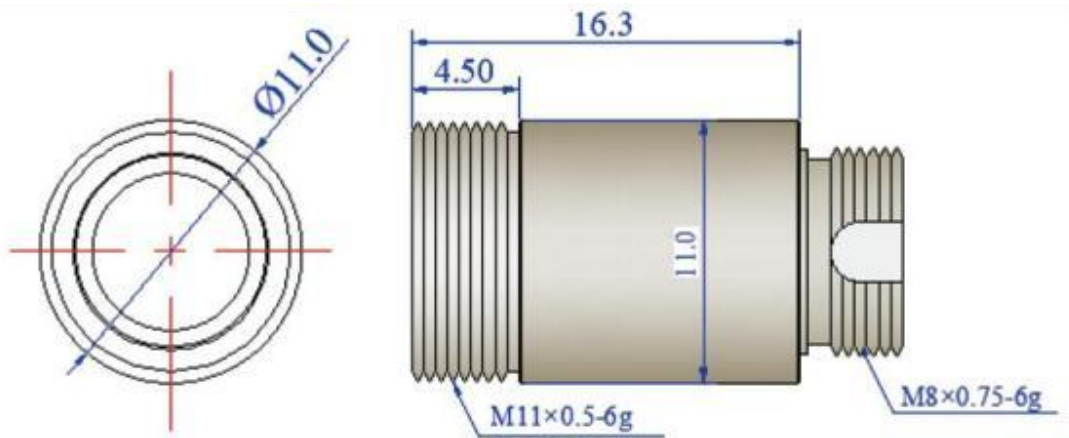
- **Application area**

Optical Network Testing | Industrial Sensing | Medical Endoscopy | Security  
Surveillance | Fiber Optic Component Inspection

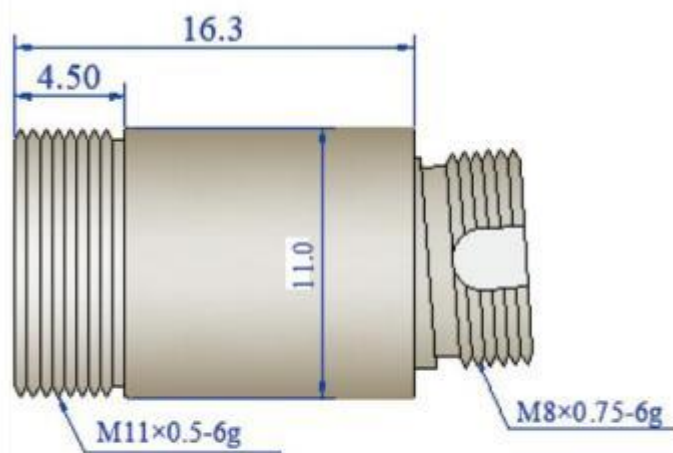
- **Core parameters**

| Center wavelength | Operating Bandwidth | Waist Beam | Connectors |
|-------------------|---------------------|------------|------------|
| 1310nm            | 1050~ 1700nm        | 2.91mm     | FC/APC     |

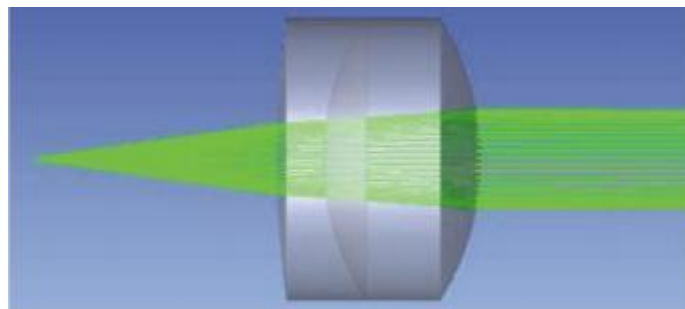
- General Parameters

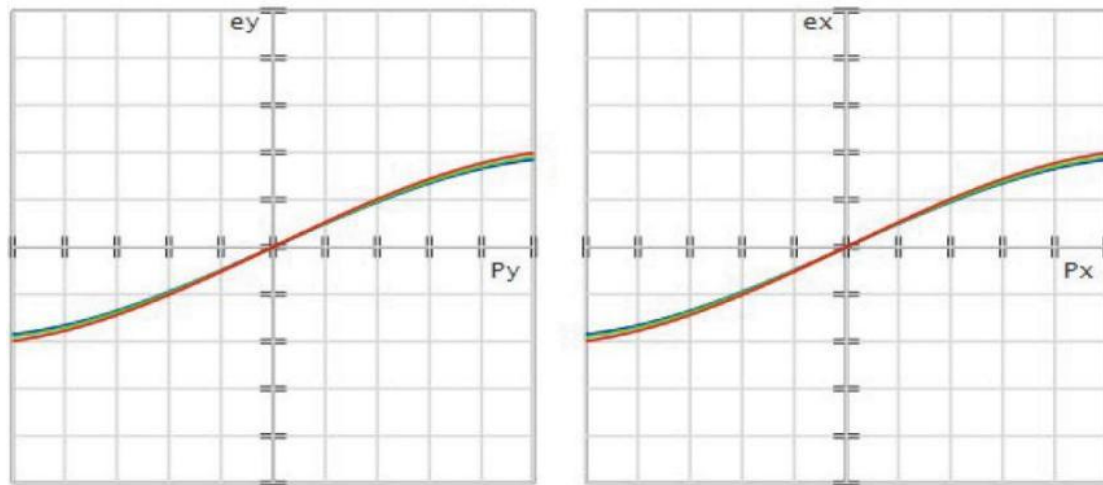


**A Type**



**B Type**





**phasic variation curve with wavelength**

| Wavelength | Band width | Waist Beam | Divergence Angle | EFL      | NA   | Package Dia. | Fiber Type | Max. Power                       | Transmittance |
|------------|------------|------------|------------------|----------|------|--------------|------------|----------------------------------|---------------|
| 405nm      | ± 30nm     | 0.97 mm    | 0.062+0.01°      | 4.06 mm  | 0.61 | Φ 11mm       | 405 HP     | 2W/mm <sup>2</sup><br>@Beam Size | >95%          |
|            | ± 30nm     | 2.0 mm     | 0.03+0.01°       | 10.05 mm | 0.37 | Φ 11mm       |            |                                  |               |

|       |           |            |                 |             |          |               |           |  |  |
|-------|-----------|------------|-----------------|-------------|----------|---------------|-----------|--|--|
|       | ±<br>30nm | 3.7<br>mm  | 0.021+<br>0.01° | 15.96<br>mm | 0.<br>25 | Φ<br>11m<br>m |           |  |  |
|       | ±<br>30nm | 3.95<br>mm | 0.015+<br>0.01° | 19.95<br>mm | 0.<br>2  | Φ<br>11m<br>m |           |  |  |
| 450nm | ±<br>30nm | 0.96<br>mm | 0.06+0<br>.01°  | 4.10<br>mm  | 0.<br>6  | Φ<br>11m<br>m | 460<br>HP |  |  |
|       | ±<br>30nm | 2.0<br>mm  | 0.028+<br>0.01° | 10.07<br>mm | 0.<br>37 | Φ<br>11m<br>m |           |  |  |
|       | ±<br>30nm | 3.6<br>mm  | 0.020+<br>0.01° | 15.98<br>mm | 0.<br>25 | Φ<br>11m<br>m |           |  |  |
|       | ±<br>30nm | 3.95<br>mm | 0.014+<br>0.01° | 19.96<br>mm | 0.<br>2  | Φ<br>11m<br>m |           |  |  |

|       |           |            |                 |             |          |               |           |  |  |
|-------|-----------|------------|-----------------|-------------|----------|---------------|-----------|--|--|
| 520nm | ±<br>30nm | 0.92<br>mm | 0.059+<br>0.01° | 4.15<br>mm  | 0.<br>6  | Φ<br>11m<br>m |           |  |  |
|       | ±<br>30nm | 2.0<br>mm  | 0.025+<br>0.01° | 10.09<br>mm | 0.<br>37 | Φ<br>11m<br>m |           |  |  |
|       | ±<br>30nm | 3.2<br>mm  | 0.019+<br>0.01° | 15.98<br>mm | 0.<br>25 | Φ<br>11m<br>m |           |  |  |
|       | ±<br>30nm | 3.95<br>mm | 0.014+<br>0.01° | 19.97<br>mm | 0.<br>2  | Φ<br>11m<br>m |           |  |  |
| 635nm | ±<br>30nm | 0.87<br>mm | 0.056+<br>0.01° | 4.20<br>mm  | 0.<br>58 | Φ<br>11m<br>m | 630<br>HP |  |  |
|       | ±<br>30nm | 2.0<br>mm  | 0.024+<br>0.01° | 10.13<br>mm | 0.<br>37 | Φ<br>11m<br>m |           |  |  |

|       |           |            |                 |             |          |               |           |  |  |
|-------|-----------|------------|-----------------|-------------|----------|---------------|-----------|--|--|
|       | ±<br>30nm | 3.12<br>mm | 0.019+<br>0.01° | 16.01<br>mm | 0.<br>25 | Φ<br>11m<br>m |           |  |  |
|       | ±<br>30nm | 3.95<br>mm | 0.014+<br>0.01° | 20m<br>m    | 0.<br>2  | Φ<br>11m<br>m |           |  |  |
| 780nm | ±<br>30nm | 1.95<br>mm | 0.031+<br>0.01° | 10.04<br>mm | 0.<br>37 | Φ<br>11m<br>m | 780<br>HP |  |  |
|       | ±<br>30nm | 3.49<br>mm | 0.020+<br>0.01° | 16.0<br>mm  | 0.<br>24 | Φ<br>11m<br>m |           |  |  |
|       | ±<br>30nm | 4.4<br>mm  | 0.015+<br>0.01° | 20.03<br>mm | 0.<br>2  | Φ<br>11m<br>m |           |  |  |
| 850nm | ±<br>30nm | 2.0<br>mm  | 0.030+<br>0.01° | 10.05<br>mm | 0.<br>37 | Φ<br>11m<br>m |           |  |  |

|  |           |            |                 |             |          |           |  |  |  |
|--|-----------|------------|-----------------|-------------|----------|-----------|--|--|--|
|  | ±<br>30nm | 3.47<br>mm | 0.020+<br>0.01° | 16.01<br>mm | 0.<br>24 | Φ<br>11mm |  |  |  |
|  | ±<br>30nm | 3.95<br>mm | 0.016+<br>0.01° | 20.03<br>mm | 0.<br>2  | Φ<br>11mm |  |  |  |

| Wavelength | Bandwidth  | Waist Beam | Divergence Angle | EFL         | NA       | Package Dia. | Fiber Type | Max. Power           | Transmittance |
|------------|------------|------------|------------------|-------------|----------|--------------|------------|----------------------|---------------|
| 980nm      | 600~1050nm | 2.0mm      | 0.035+<br>0.01°  | 10.0<br>7mm | 0.<br>37 | Φ<br>11mm    | 980HP      | 2W/mm²<br>@Beam Size | >95%          |
|            | 600~1050nm | 3.39mm     | 0.024+<br>0.01°  | 16.0<br>3mm | 0.<br>24 | Φ<br>11mm    |            |                      |               |

|            |                 |            |                 |             |          |               |             |  |  |
|------------|-----------------|------------|-----------------|-------------|----------|---------------|-------------|--|--|
|            | 600~10<br>50nm  | 4.23<br>mm | 0.018+<br>0.01° | 20.0<br>5mm | 0.<br>2  | Φ<br>11m<br>m |             |  |  |
| 1064n<br>m | 1050~1<br>700nm | 2.0<br>mm  | 0.038+<br>0.01° | 10.0<br>3mm | 0.<br>37 | Φ<br>11m<br>m | HI10<br>60  |  |  |
|            | 1050~1<br>700nm | 3.51<br>mm | 0.032+<br>0.01° | 15.9<br>7mm | 0.<br>24 | Φ<br>11m<br>m |             |  |  |
|            | 1050~1<br>700nm | 3.9<br>mm  | 0.026+<br>0.01° | 19.9<br>7mm | 0.<br>2  | Φ<br>11m<br>m |             |  |  |
| 1310n<br>m | 1050~1<br>700nm | 2.0<br>mm  | 0.053+<br>0.01° | 10.0<br>7mm | 0.<br>37 | Φ<br>11m<br>m | SMF<br>-28E |  |  |
|            | 1050~1<br>700nm | 2.91<br>mm | 0.036+<br>0.01° | 16.0<br>1mm | 0.<br>24 | Φ<br>11m<br>m |             |  |  |

|            |                 |            |                 |             |          |               |  |  |  |
|------------|-----------------|------------|-----------------|-------------|----------|---------------|--|--|--|
|            | 1050~1<br>700nm | 3.62<br>mm | 0.028+<br>0.01° | 20.0<br>mm  | 0.<br>2  | Φ<br>11m<br>m |  |  |  |
| 1550n<br>m | 1050~1<br>700nm | 2.0<br>mm  | 0.06+0<br>.01°  | 10.1<br>1mm | 0.<br>37 | Φ<br>11m<br>m |  |  |  |
|            | 1050~1<br>700nm | 3.14<br>mm | 0.039+<br>0.01° | 16.0<br>8mm | 0.<br>24 | Φ<br>11m<br>m |  |  |  |
|            | 1050~1<br>700nm | 3.55<br>mm | 0.031+<br>0.01° | 20.0<br>7mm | 0.<br>2  | Φ<br>11m<br>m |  |  |  |
| 1654n<br>m | 1050~1<br>700nm | 2.0<br>mm  | 0.06+0<br>.01°  | 10.1<br>4mm | 0.<br>37 | Φ<br>11m<br>m |  |  |  |
|            | 1050~1<br>700nm | 3.2<br>mm  | 0.036+<br>0.01° | 16.1<br>5mm | 0.<br>24 | Φ<br>11m<br>m |  |  |  |



|  |        |      |        |      |    |     |  |  |  |
|--|--------|------|--------|------|----|-----|--|--|--|
|  | 1050~1 | 3.65 | 0.029+ | 20.1 | 0. | Φ   |  |  |  |
|  | 700nm  | mm   | 0.01°  | 2mm  | 2  | 11m |  |  |  |
|  |        |      |        |      |    | m   |  |  |  |

## 3D modeling drawing preview

