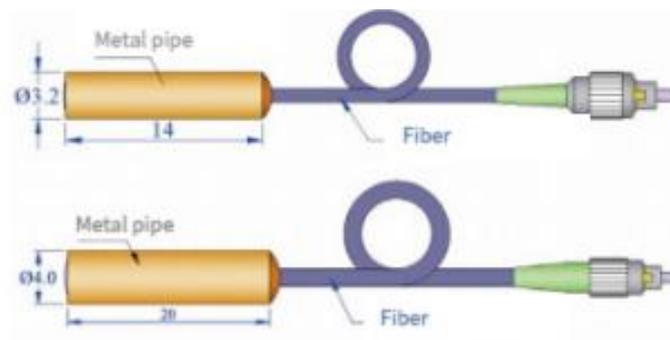


Single Mode Fiber Collimator 405nm



- **Product Description**

It is composed of a fiber pigtail and a focusing lens that are precisely positioned and packaged. It can convert the outgoing light from the fiber into a parallel beam (Gaussian beam), or focus and couple the external parallel light into the fiber. It can also be used alone to achieve a light spot of the required size at a specific position according to the established divergence angle.

- **Product features**

Precise wavelength & low loss; high-quality output beam; compact and reliable mechanical design; flexible application options

● Part Number

MP-NIR-CLM-405-0.27-0.12-SA

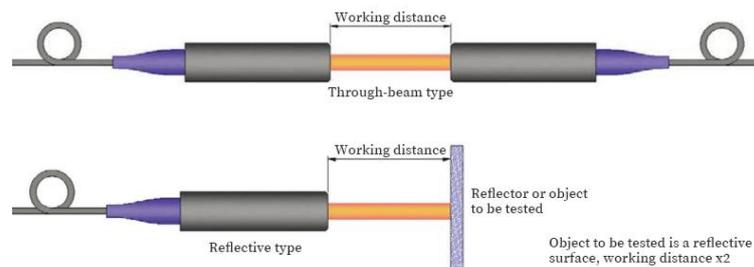
● Application area

Precision Manufacturing and Testing | Biomedical and Scientific Research |
 Frontier Research

● Core parameters

Wavelength	Beam Waist	Connector
405m	0.27mm	FC/APC

● General Parameters



According to the working distance, it can be divided into fixed working distance (fixed focus) collimator and working distance range (long depth of field) collimator. Spherical lens or gradient refractive index lens is selected according

to different working distances.

We recommend that the collimator be installed in the optical precision adjustment frame for alignment and debugging to ensure the best coupling efficiency when coupling spatial beams.

Difference	Fixed Working Distance Collimator	Variable Collimator for Working Distance Range
Working Distance	1m	0-1m any position
Beam Characteristics	Collimation/Focus	Collimation
Beam Size	At a fixed position, a precise sized beam spot can be obtained, with a minimum size of 20um. The beam size rapid changes when moved forwards or backwards.	Move forward and backward within an adjustable range, and the spot size changes very little.
Insert Loss For A Pair	Changes significantly with distance.	Insensitive to changes with distance.
Output Loss	No difference	
Return Loss	No difference	

Fix Working Distance

Wave length	Band width	Working distance	Beam waist	Divergence angle	Package	Insert loss	Return loss	Mode field diameter	Fiber type	Connector
405nm	± 20nm	100mm	0.27mm	2.1mrad	Φ 3.4mm	≤ 2.0dB	≥ 55dB	3.0±	405 HP	FC/PC
405nm	± 20nm	300mm	0.70mm	0.78mrad	Φ 3.4mm	≤ 2.0dB	≥ 55dB	0.5um		
450nm	± 20nm	100mm	0.26mm	2.3mrad	Φ 3.4mm	≤ 2.0dB	≥ 55dB	3.5±	460 HP	FC/PC LC/PC
450nm	± 20nm	300mm	0.68mm	0.87mrad	Φ 3.4mm	≤ 2.0dB	≥ 55dB	0.5um		
520nm	± 20nm	100mm	0.31mm	2.3mrad	Φ 3.4mm	≤ 1.5dB	≥ 55dB	3.6±	Customer specified	
520nm	± 20nm	300mm	0.80mm	0.87mrad	Φ 3.4mm	≤ 1.5dB	≥ 55dB	0.5um		
635nm	± 20nm	100mm	0.39mm	2.6mrad	Φ 3.4mm	≤ 0.7dB	≥ 55dB	4.2± 0.5um	630H	

635nm	±20nm	300mm	0.85m	1.0mr	Φ	≤	≥		P
			m	ad	3.4mm	0.8dB	55dB		
635nm	±20nm	1000m	1.32m	0.7mr	Φ	≤	≥		
		m	m	ad	3.4mm	1.0dB	55dB		
780nm	±20nm	100mm	0.39m	2.6mr	Φ	≤	≥		
			m	ad	3.4mm	0.6dB	55dB		
780nm	±20nm	300mm	0.99m	1.0mr	Φ	≤	≥	4.5±	
			m	ad	3.4mm	0.7dB	55dB	0.5um	
780nm	±20nm	1000m	1.55m	0.7mr	Φ	≤	≥		780H
			m	ad	4.0mm	0.9dB	55dB		
850nm	±20nm	100mm	0.37m	3.0mr	Φ	≤	≥		P
			m	ad	3.4mm	0.6dB	55dB		
850nm	±20nm	300mm	0.97m	1.1mr	Φ	≤	≥	5.0±	
			m	ad	3.4mm	0.7dB	55dB	0.5um	
850nm	±20nm	1000m	1.51m	0.75m	Φ	≤	≥		
			m	rad	4.0mm	0.9dB	55dB		
980nm	±20nm	100mm	0.36m	3.5mr	Φ	≤	≥	5.9±	Hi106
			m	ad	3.4mm	0.5dB	55dB	0.3um	0

980nm	±20nm	300mm	0.96m	1.4mr	Φ	≤	≥			
			m	ad	3.4mm	0.6dB	55dB			
980nm	±20nm	1000m	1.48m	0.87m	Φ	≤	≥			
		m	m	rad	4.0mm	0.9dB	55dB			
1064nm	±20nm	100mm	0.37m	3.3mr	Φ	≤	≥	6.2± 0.3um		
			m	ad	3.4mm	0.5dB	55dB			
1064nm	±20nm	300mm	0.99m	1.4mr	Φ	≤	≥			
			m	ad	3.4mm	0.6dB	55dB			
1064nm	±20nm	1000m	1.53m	0.87m	Φ	≤	≥			
		m	m	rad	4.0mm	0.9dB	55dB			
1310nm	±20nm	100mm	0.38m	4.4mr	Φ	≤	≥	9.6± 0.4um	SMF- 28e	
			m	ad	3.4mm	0.4dB	55dB			
1310nm	±20nm	300mm	0.73m	2.3mr	Φ	≤	≥			
			m	ad	3.4mm	0.5dB	55dB			
1310nm	±20nm	1000m	0.91m	1.9mr	Φ	≤	≥	10.4± 0.5um	G657 A1/	
			m	ad	4.0mm	0.7dB	55dB			
1550nm	±20nm	100mm	0.46m	4.5mr	Φ	≤	≥			
			m	ad	3.4mm	0.4dB	55dB			



1550 nm	± 20nm	300mm	0.85m	2.4mr	Φ	≤	≥		G657 A2 ZBL
			m	ad	3.4mm	0.5dB	55dB		
1550 nm	± 20nm	1000m	1.35m	1.7mr	Φ	≤	≥	10.9 ±0.5um	
		m	m	ad	4.0mm	0.7dB	55dB		
1650 nm	± 5nm	100mm	0.47m	4.5mr	Φ	≤	≥		
			m	ad	3.4mm	0.4dB	55dB		
1650 nm	± 5nm	300mm	0.89m	2.4mr	Φ	≤	≥		
			m	ad	3.4mm	0.5dB	55dB		
1650 nm	± 5nm	1000m	1.22m	1.7mr	Φ	≤	≥		
		m	m	ad	4.0mm	0.7dB	55dB		

Adjustable Working Distance

Wave length	Band width	Working distance	Export beam size	Divergence angle	Pack age	Inser t loss	Retur n loss	Mode field diameter	Fiber type	Conn ector
780nm	± 20nm	0-350m	0.9mm	0.95mrad	Φ 3.4mm	≤ 0.8dB	≥ 55dB	4.5± 0.5um	780HP	FC/PC FC/AP



850nm	±20nm	0-350m	1.0mm	1.05m rad	Φ 3.4m m	≤ 0.8d B	≥ 55dB	5.0± 0.5um	C LC/PC or Custo mer specif ied Hi106 0
980nm	±20nm	0-350m	0.99m	1.26m rad	Φ 3.4m m	≤ 0.7d B	≥ 55dB	5.9± 0.3um	
980nm	±20nm	50-1000mm	1.54m	0.81m rad	Φ 4.0m m	≤ 0.9d B	≥ 55dB		
1064nm	±20nm	0-350m	1.0mm	1.35m rad	Φ 3.4m m	≤ 0.7d B	≥ 55dB	6.2± 0.3um	
1064nm	±20nm	500-1000mm	1.6mm	0.85m rad	Φ 4.0m m	≤ 0.9d B	≥ 55dB		
1310nm	±20nm	0-350m	0.81m	2.06m rad	Φ 3.4m m	≤ 0.7d B	≥ 55dB	9.6± 0.4um	

1310 nm	± 20nm	50-1000 mm	1.3mm	1.31m rad	Φ 4.0m m	≤ 0.9d B	≥ 55dB	1/ G657A 2/ ZBL
1550 nm	± 20nm	0-350m m	0.9mm	2.15m rad	Φ 3.4m m	≤ 0.7d B	≥ 55dB	
1550 nm	± 20nm	50-1000 mm	1.45m	1.36m rad	Φ 4.0m m	≤ 0.9d B	≥ 55dB	10.4± 0.5um
1650 nm	± 20nm	0-350m m	0.96m	2.19m rad	Φ 3.4m m	≤ 0.7d B	≥ 55dB	10.9± 0.5um
1650 nm	± 20nm	50-1000 mm	1.50m	1.40m rad	Φ 4.0m m	≤ 0.9d B	≥ 55dB	0.5um

