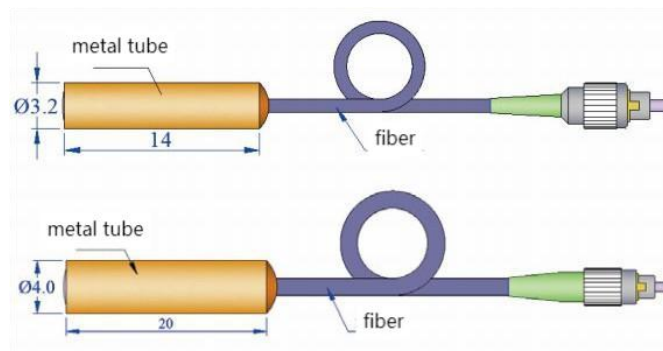


Single Mode Fiber Collimator 405nm Beam

Waist Spot 0.70mm



● 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-405-0.7-0.045-SA

● Application area

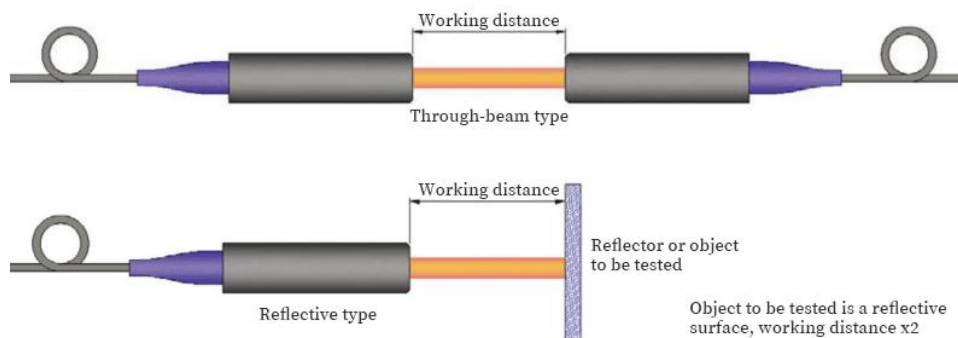
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● Core parameters

Wavelength	Beam Waist	Connector
405nm	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

Wavelength	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± 0.5um	405H P	FC/P C

405nm	±20nm	300mm	0.70m	0.78mrad	Φ	≤	≥			FC/APC
450nm	±20nm	100mm	0.26m	2.3mrad	Φ	≤	≥	3.5±		LC/PC or
450nm	±20nm	300mm	0.68m	0.87mrad	Φ	≤	≥	0.5um		Customer
520nm	±20nm	100mm	0.31m	2.3mrad	Φ	≤	≥	3.6±		460HP specified
520nm	±20nm	300mm	0.80m	0.87mrad	Φ	≤	≥	0.5um		
635nm	±20nm	100mm	0.39m	2.6mrad	Φ	≤	≥			
635nm	±20nm	300mm	0.85m	1.0mrad	Φ	≤	≥	4.2±0.5um		630HP
635nm	±20nm	1000mm	1.32m	0.7mrad	Φ	≤	≥			
780nm	±20nm	100mm	0.39m	2.6mrad	Φ	≤	≥	4.5±		780HP
780nm	±20nm	300mm	0.99m	1.0mrad	Φ	≤	≥	0.5um		P



780nm	±20nm	1000mm	1.55m	0.7mrad	Φ	≤	≥			
			m	d	4.0mm	0.9dB	55dB			
850nm	±20nm	100mm	0.37m	3.0mrad	Φ	≤	≥			
			m	d	3.4mm	0.6dB	55dB			
850nm	±20nm	300mm	0.97m	1.1mrad	Φ	≤	≥			5.0±0.5um
			m	d	3.4mm	0.7dB	55dB			
850nm	±20nm	1000mm	1.51m	0.75mrad	Φ	≤	≥			
			m	ad	4.0mm	0.9dB	55dB			
980nm	±20nm	100mm	0.36m	3.5mrad	Φ	≤	≥			
			m	d	3.4mm	0.5dB	55dB			
980nm	±20nm	300mm	0.96m	1.4mrad	Φ	≤	≥			5.9±0.3um
			m	d	3.4mm	0.6dB	55dB			
980nm	±20nm	1000mm	1.48m	0.87mrad	Φ	≤	≥			
			m	ad	4.0mm	0.9dB	55dB			Hi106
1064nm	±20nm	100mm	0.37m	3.3mrad	Φ	≤	≥			0
			m	d	3.4mm	0.5dB	55dB			
1064nm	±20nm	300mm	0.99m	1.4mrad	Φ	≤	≥			6.2±0.3um
			m	d	3.4mm	0.6dB	55dB			
1064nm	±20nm	1000mm	1.53m	0.87mrad	Φ	≤	≥			
			m	ad	4.0mm	0.9dB	55dB			



1310nm	±20nm	100mm	0.38m	4.4mrad	Φ	≤	≥	9.6± 0.4um	SMF-28e G657A1/ G657A2 ZBL
1310nm	±20nm	300mm	0.73m	2.3mrad	Φ	≤	≥		
1310nm	±20nm	1000mm	0.91m	1.9mrad	Φ	≤	≥		
1550nm	±20nm	100mm	0.46m	4.5mrad	Φ	≤	≥	10.4± 0.5um	
1550nm	±20nm	300mm	0.85m	2.4mrad	Φ	≤	≥		
1550nm	±20nm	1000mm	1.35m	1.7mrad	Φ	≤	≥		
1650nm	±5nm	100mm	0.47m	4.5mrad	Φ	≤	≥	10.9 ±0.5um	
1650nm	±5nm	300mm	0.89m	2.4mrad	Φ	≤	≥		
1650nm	±5nm	1000mm	1.22m	1.7mrad	Φ	≤	≥		

Adjustable Working Distance

Wavelength	Bandwidth	Working distance	Export beam size	Divergence angle	Package	Insert loss	Return loss	Mode field diameter	Fiber type	Connector
780nm	±20nm	0-350m	0.9mm	0.95mrad	Φ3.4mm	≤0.8dB	≥55dB	4.5±0.5um	780H P	FC/PC FC/AP
850nm	±20nm	0-350m	1.0mm	1.05mrad	Φ3.4mm	≤0.8dB	≥55dB	5.0±0.5um		
980nm	±20nm	0-350m	0.99mm	1.26mrad	Φ3.4mm	≤0.7dB	≥55dB	5.9±0.3um	Hi1060	C LC/PC or Customer specified
980nm	±20nm	50-1000mm	1.54mm	0.81mrad	Φ4.0mm	≤0.9dB	≥55dB			
1064nm	±20nm	0-350m	1.0mm	1.35mrad	Φ3.4mm	≤0.7dB	≥55dB	6.2±0.3um	Hi1060	C LC/PC or Customer specified
1064nm	±20nm	500-1000mm	1.6mm	0.85mrad	Φ4.0mm	≤0.9dB	≥55dB			



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1310nm	± 20nm	0-350mm	0.81mm	2.06mm	φ 3.4mm	≤ 0.7dB	≥55dB	9.6±		
1310nm	± 20nm	50-1000mm	1.3mm	1.31mm	φ 4.0mm	≤ 0.9dB	≥55dB	0.4um		SMF-2
1550nm	± 20nm	0-350mm	0.9mm	2.15mm	φ 3.4mm	≤ 0.7dB	≥55dB	10.4±	8e/	G657A
1550nm	± 20nm	50-1000mm	1.45m	1.36mm	φ 4.0mm	≤ 0.9dB	≥55dB	0.5um	1/	G657A
1650nm	± 20nm	0-350mm	0.96m	2.19mm	φ 3.4mm	≤ 0.7dB	≥55dB	10.9±		
1650nm	± 20nm	50-1000mm	1.50m	1.40mm	φ 4.0mm	≤ 0.9dB	≥55dB	0.5um	2/	ZBL

