

Fiber Optical Mini Collimators

(1.2mm-3.2mm, SM, PM, 5W, 10W)



DATASHEET

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Features

- Low Loss
- High Power
- Long Distance
- Compact

Applications

- Device
- Test
- Special Solution

We produce a wide range of miniature fiber optic collimators featuring low loss, high return loss, no organic materials in the light path, and high optical power handling up to 10W. These collimators are utilized in many of our products, and we excel at delivering custom solutions. Our miniature collimators are specifically optimized for applications with working distances of less than 20 mm, as the optical limitations of the miniature lens make them less suitable for long-distance use. For longer working distance applications, please refer to our High-Power Fiber Optic Collimator.

For the 1950 nm band, we offer lower-loss collimating lenses made with NSF11 glass, which reduce coupling loss between a pair of collimators by approximately 0.3 dB compared to standard glass lenses.

Specifications

Parameter	Min	Typical	Max	Unit
Insertion Loss ^[1]	630, 632, 650 ±20nm	0.8	1	dB
	780, 850, 980 ±20nm	0.3	0.4	
	1060, 1220 ±30nm	0.3	0.3	
	1310 - 1600 nm	0.2	0.25	
	1900 - 2400nm	0.4	0.5	
Working Distance	1	5	20	mm
PMD (SMF Switch only)		0.1	0.3	ps
Extinction Ratio (PMF only)	18	25		dB
Return Loss		55	60	dB
Optic power Handling ^[4]	Normal power version	0.3	0.5	W
	High power version		5, 10	W
Operating Temperature	Standard	-5	75	°C
	Special version	-40	85	°C
Storage Temperature	-45		100	°C

Notes:

[1]. Measured with a pair and without connectors

Note: The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link](#):

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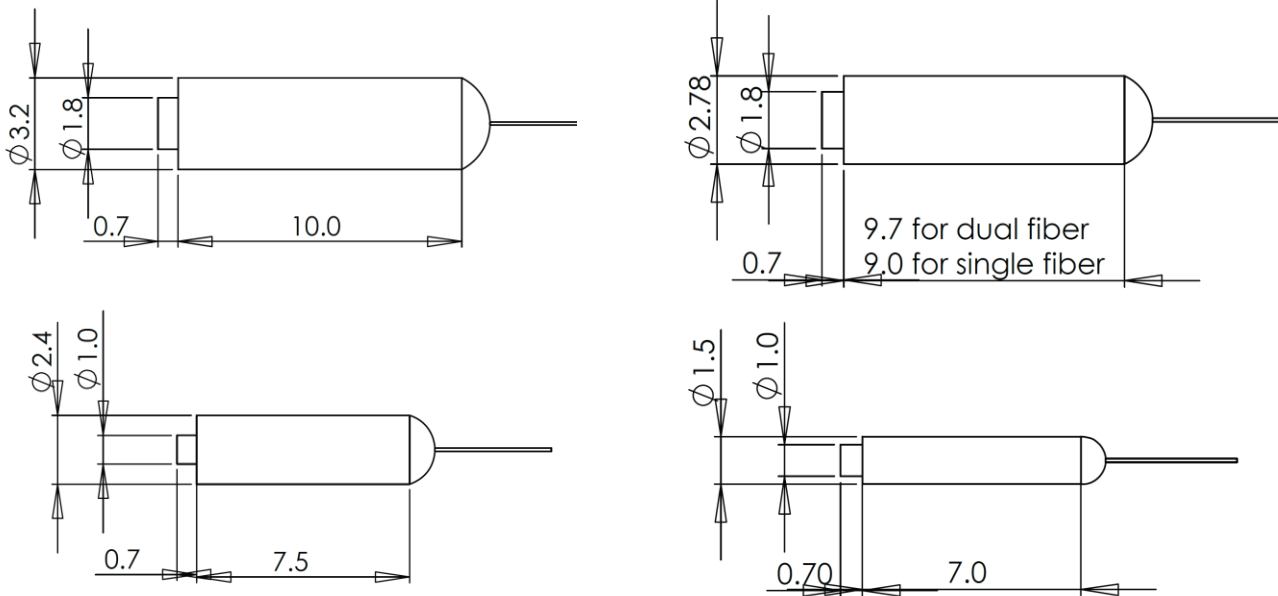
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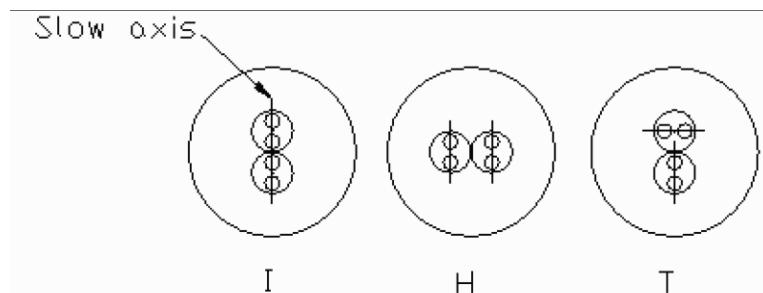
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Mechanical Dimensions (Unit: mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

PM Stress Field Orientation



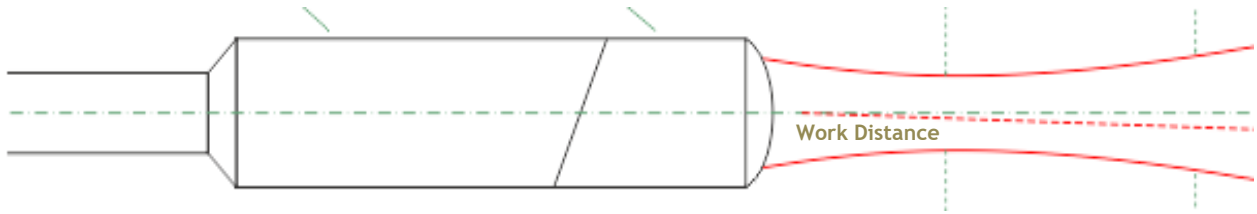
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Typical Collimator Beam Profile



Ordering Information

Prefix	Type	Slow Axis Orientation	Wavelength	Working Distance (mm)	Outer Diameter (mm)	Power	Fiber Type	Fiber Cover	Fiber Length	Connector
FCOM-	Single = 1 Single/H ^[1] = S Dual = 2 Dual/H ^[2] = D Special = 0	N/A = 4 I = 1 H = 2 T = 3 Special = 0	1550 = 5 1060 = 1 2000 = 2 1310 = 3 1480 = 4 1625 = 6 780 = 7 850 = 8 650 = E 550 = F 400 = G 1265~1620 = L Special = 0	3 = 3 4 = 4 5 = 5 6 = 6 7 = 7 8 = 8 9 = 9 10 = A 11 = B 14 = C 15 = D 16 = E 17 = F 18 = G Special = 0	1.8 = 1 3.2 = 3 2.8 = 2 1.4 = 4 1.2 = 5 Special = 0	0.5W = 1 2W = 2 5W = 5 10W = T	SMF-28 = 1 HI1060 = 2 HI780 = 3 PM1550 = 5 PM850 = 8 PM980 = 9 Special = 0	Bare fiber = 1 0.9mm tube = 3 3mm tube = 5 Special = 0	0.25m = 1 0.5m = 2 1.0 m = 3 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 LC/APC = A LC/UPC = U Special = 0

[1]. Single/High Power

[2]. Dual/High Power

* Customer must provide a working distance. We will optimize and test at the working distance point. The collimator may not meet spec off the working distance.

Warning: An Optical Collimator need to have a working distance stated by the customer at the time of order. The optical parameters only tested at the working distance.