

# 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 offer a comprehensive range of miniature fiber optic collimators designed for low loss, high return loss, and high optical power handling of up to 10W, with no organic materials in the light path. These collimators are integrated into many of our products, and we specialize in delivering custom solutions to meet specific application requirements. Our miniature collimators are optimized for working distances up to 1500 mm. For applications requiring longer working distances, we recommend our High-Power Fiber Optic Collimator. For the 1950 nm band, we uniquely provide lower-loss collimating lenses made with NSF11 glass, reducing 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 <sup>[1]</sup>	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 <sup>[4]</sup>	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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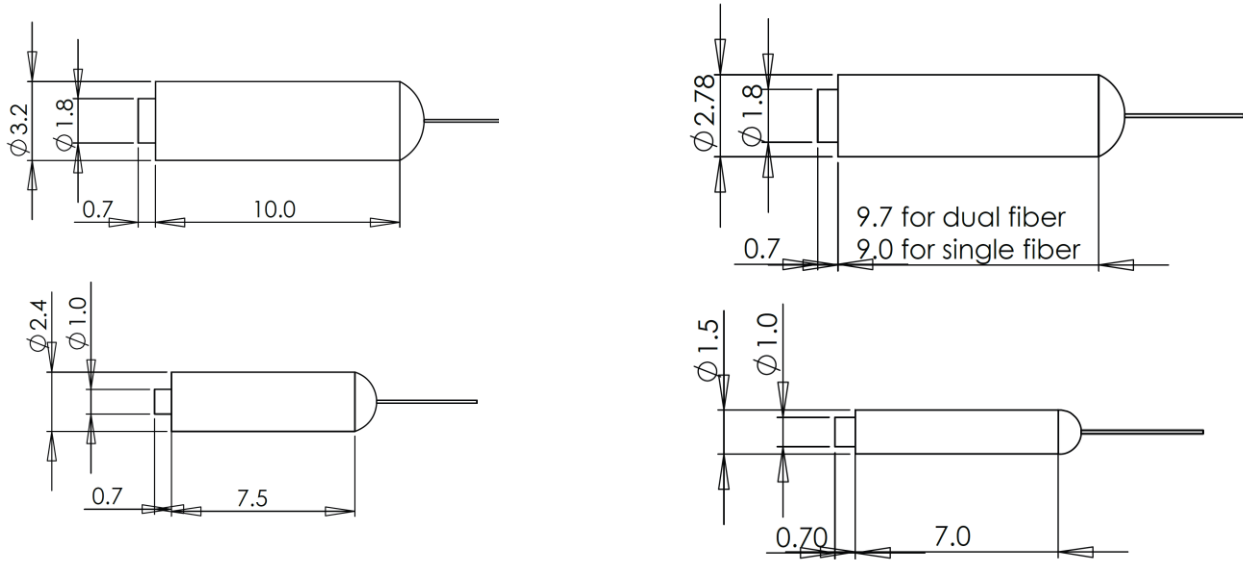
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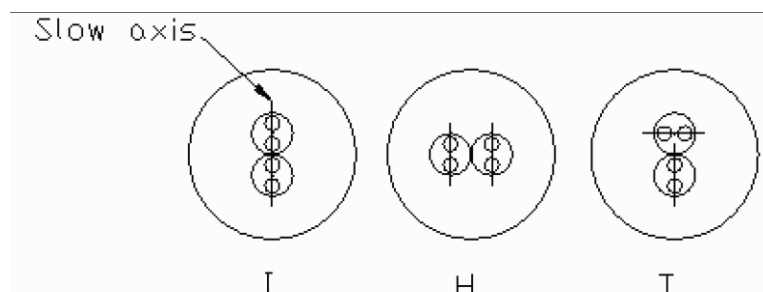
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### Mechanical Dimensions (Unit: mm)



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

### PM Stress Field Orientation



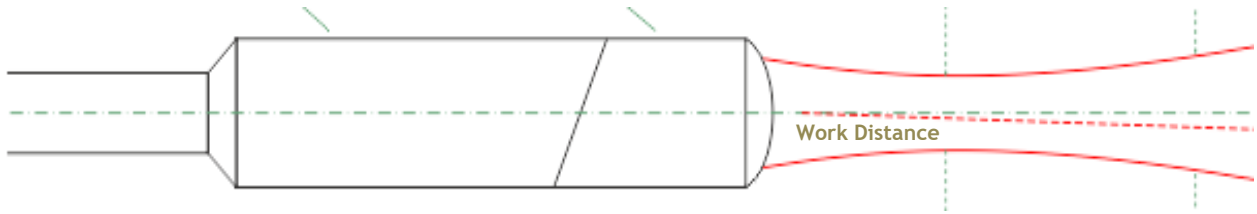
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### Typical Collimator Beam Profile



### Ordering Information

Prefix	Type	Slow Axis Orientation	Wavelength	Working Distance (mm)	Outer Diameter (mm)	Power	Fiber Type	Fiber Cover	Fiber Length	Connector
<b>FCOM-</b>	Single = 1 Single/H <sup>[1]</sup> = S Dual = 2 Dual/H <sup>[2]</sup> = 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	2 = 002 5 = 005 10 = 010 18 = 018 30 = 030 80 = 080 100 = 100 150 = 150 300 = 300 500 = 500 1200 = T12 1500 = T15 Special = 000	1.8 = 1 3.2 = 3 2.8 = 2 6.1 = 6 1.4 = 4 1.2 = 5 Special = 0	0.5W = 1 2W = 2 5W = 5 10W = T	SMF-28 = 1 Hi1060 = 2 780HP = 7 PM1550 = 5 PM850 = 8 PM980 = 9 SM600 = 6 PM630 = A PM780 = B SM800 = C SM1950 = D PM1950 = E 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.