

# Fiber Collimators Diffraction Limited



## Features

- Adjustable focus
- No epoxy in the optical path
- No fluorescence or very little
- Clean Gaussian beams at any distance
- Low wavefront error
- Very high transmission
- FC or FC/APC receptacle as standard
- 350 nm to 2300 nm

## Applications

- Lidar
- Interferometry
- Confocal Microscopy
- Optical tweezers
- Cytometry
- Scanning
- Direct write

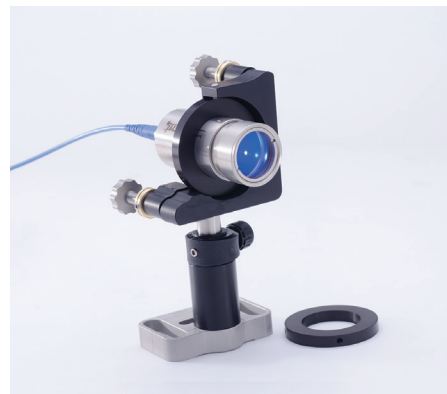
Our High Performance Fiber Collimators are of a multi-element design that gives a highly collimated, clean Gaussian beam with low wavefront error and no diffraction.

Adjustable focus collimators are very versatile. They can replace several fixed focus collimators. You can optimize the collimator to your wavelength or compensate for any endcap installed on your fiber and lock it down. Besides collimation, these fiber collimators can also be used to focus to a very tight spot at a very large distance or expand to illuminate a larger area.

Standard collimators have apertures from 3 mm to 23 mm yielding beams from 1 mm to 11.5 mm in diameter. They are stocked for quick delivery. The smaller collimators have fine 80 pitch threads for fine focus adjustment. Four coating regions cover the 350 nm to 2300 nm spectrum.

Pigtailed versions are available as well as custom housing, coatings, optical designs or environmental requirements.

See our "Large Fiber Collimator" brochure for FC40, FC45, FC100 which produces beams of 23mm, 33mm and 50mm.



FC20 with ring adapter mounted in a common optical mount.



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# Fiber Collimators

## Specifications (for singlemode fiber)

	FC3	FC5	FC7	FC10	FC20
Aperture:	3.5 mm	6.5 mm	7 mm	11.5 mm	23.5 mm
Beam size*:	1 mm	2.1 mm	3 mm	5.5 mm	11.5 mm
Beam divergence:	< 1 mrad	< 0.5 mrad	<0.37 mrad	< 0.25 mrad	< 0.1 mrad
Wavefront error over 1/e <sup>2</sup> points rms:	< 1/10 wave				
Receptacle:	FC or FC/APC standard				
Adjustable Collimation:	80 tpi in adjustment	80 tpi in adjustment	80 tpi in adjustment	80 tpi in adjustment	Adjustable
Locking:	yes				
Housing material:	Stainless Steel				
Weight:	12 g (0.4 oz.)	45 g (1.6 oz.)	28 g (1 oz.)	85 g (3.0 oz.)	286 g (10.1 oz.)

\* Beam sizes are approximate due to variations in fiber NA and wavelength. Beam size is stated at 1/e<sup>2</sup> points using singlemode fiber with NA = 0.13 stated for fiber at 635 nm

## Ordering Information

Model #	Description
FC3-λ-FC	Yields ~1 mm beam. FC receptacle
FC3-λ-APC	Yields ~1 mm beam. FC/APC receptacle
FC5-λ-FC	Yields ~2.1 mm beam. FC receptacle
FC5-λ-APC	Yields ~2.1 mm beam. FC/APC receptacle
FC7-λ-FC	Yields ~3 mm beam. FC receptacle
FC7-λ-APC	Yields ~3 mm beam. FC/APC receptacle
FC10-λ-FC	Yields ~5.5 mm beam. FC receptacle
FC10-λ-APC	Yields ~5.5 mm beam. FC/APC receptacle
FC20-λ-FC	Yields ~ 11.5 mm beam. FC receptacle
FC20-λ-APC	Yields ~11.5 mm beam. FC/APC receptacle
Accessories	
FC5R-1.0	FC3 and FC5 ring adapter for 1 in. optical mounts
FC7R-1.0	FC7 ring adapter for 1 in. optical mounts.
FC10R-1.0	FC10 ring adapter for 1 in. optical mounts
FC20R-2.0	FC20 ring adapter for 2 in. optical mounts

Use -VIS1 for any λ = 350 nm to 600 nm  
 Use -NIR1 for any λ = 600 nm to 1000 nm  
 Use -NIR2 for any λ = 1000 nm to 1700 nm  
 Use -SWIR for any λ = 1500 nm to 2300 nm

Standard collimators are stock items.

## Large Fiber Collimators

Please see our brochure on **Large Fiber Collimators** for bigger beams from FC40, FC45 and FC100

## Specialty Fiber Collimators

Mid IR Fiber Collimators  
 Vacuum Compatible  
 Non Magnetic Fiber Collimators  
 Radiation Resistant  
 UV versions

Special beam sizes, coatings, housing materials or wavelength ranges have also been manufactured. Pigtailed versions and SMA receptacle are also available.

We manufacture all our collimators and optics in our facility in California, USA.

Please call 714-898-6001 or email [sales@microlaser.com](mailto:sales@microlaser.com) for your particular application.

Specifications subject to change without notice.



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