

SWIR Fiber Collimators

(1.5-2 μ m)



Features

- Adjustable focus
- No epoxy in the optical path
- Clean Gaussian beams at any distance
- Low wavefront error
- Very high transmission
- FC, FC/APC, SMA or pigtailed
- Excellent for fiber lasers

Applications

- Lidar
- Doppler Lidar
- Gas or chemical sensing
- Medical

Our High Performance Fiber Collimators are now available for use between 1500nm to 2300nm. They are a multi-element design that gives a highly collimated, clean Gaussian beam with low wavefront error and no diffraction.

Adjustable focus allows the collimator to be tuned to any wavelength within the coating range and be locked down. This is very useful for many of the newer lasers at wavelengths for gas detection such as NH₃, CH₄, NO, H₂O, CO and CO₂ and also for medical use near 2 microns.

These adjustable collimators also allow you to focus the beam at some distance so that you can probe a distant sample with much higher power in a small spot.

For Lab users we have an adaptor rings to mount the collimator onto any 1 inch or 2 inch optical mounts. FC40 and FC45 have a clamp style mount for platforms or tripods.

For OEM users an adjustable collimator can be used for prototyping and then switched to a fixed unit. These collimators can be customized with fibers for this region, mounting requests, material or environmental requirements.



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SWIR Fiber Collimators, 1.5-2 μ m

Specifications

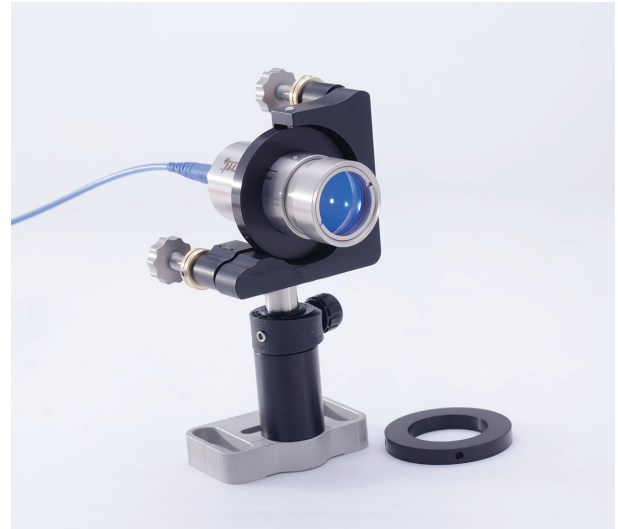
	FC5	FC10	FC20	FC40	FC45
Aperture:	5 mm	10 mm	22 mm	46 mm	46 mm
Beam size*:	2 mm	5.5 mm	11 mm	23 mm	33 mm
Beam divergence:	< 0.5 mrad	< 0.25 mrad	< 0.1 mrad	<0.067 mrad	< 0.05 mrad
Wavefront error, 1/e ² points, rms:	< 1/10 wave	< 1/10 wave	< 1/10 wave	< 1/10 wave	< 1/10 wave
Receptacle:	FC or FC/APC	FC or FC/APC	FC or FC/APC	FC or FC/APC	FC or FC/APC
Collimation:	Adjustable, 80 tpi	Adjustable, 80 tpi	Adjustable	Adjustable with no rotation	Adjustable with no rotation
Locking:	yes	yes	yes	yes	yes
Housing material:	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Weight:	45 g (1.6 oz.)	85 g (3.0 oz.)	286 g (10.1 oz.)	0.83 kg (1.83 lb)	1.12 kg (2.46 lb.)

*measured at 1/e² points using fiber labeled with NA = 0.13 at 635 nm

Usable with lasers coupled to singlemode fibers, PM fibers and fiber lasers.

Ordering Information

Model #	Description
FC5-SWIR-T	FC5 with FC receptacle
FC10-SWIR-T	FC10 with FC receptacle
FC20-SWIR-T	FC20 with FC receptacle
FC40-SWIR-T	FC40 with FC receptacle
FC45-SWIR-T	FC45 with FC receptacle
FC5-SWIR-T/A	FC5 with FC/APC receptacle
FC10-SWIR-T/A	FC10 with FC/APC receptacle
FC20-SWIR-T/A	FC20 with FC/APC receptacle
FC40-SWIR-T/A	FC40 with FC/APC receptacle
FC45-SWIR-T/A	FC45 with FC/APC receptacle



Ring adapters

Accessories

FC5R-1.0	Ring adaptor for FC5
FC10R-1.0	Ring adaptor for FC10
FC20R-2.0	Ring adaptor for FC20
MT1.75SS	Mount for FC40 and FC45

Collimators with SWIR coating are usable from 1500nm to 2300nm.



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