

GAUSSIAN BEAM FIBER COLLIMATORS

FOR SINGLE MODE AND PM FIBERS

We provide a full family of Gaussian beam fiber-optic collimators for coupling light into and out of fibers. Through detailed design considerations and proprietary high-return loss technology, these collimators exhibit extremely low beam distortion, low loss, high return loss, and high reliability.

We have the capability to design and manufacture custom collimators to the specs of your choice. Beam diameter, working distance, fiber type, and wavelength can all be customized to fit your individual applications.

Standard wavelengths are 900-1100nm and 1520-1600nm. Customized designs in other wavelengths can be made per your requirements, from 400- 2000 nanometers.

These collimators are available with variety of different single-mode fibers (SMF-28, PM980, PM13, PM15, LMA, and PLMA) and Multimode fibers and cabling options (bare fiber, Hytrel, Taflon , and PVDF tubes), providing the appropriate level of protection for the environment and operating temperature range.



Features:

- Gaussian beam profile at any distance
- Full beam sizes ranging from 0.2mm to 25mm
- Low optical loss at any working distance
- Single mode fibers, PM fibers, and multimode fibers

Applications:

- Fiber optic communication
- Free space communication
- Fiber laser
- Interferometry
- Confocal microscopy
- Lidar

Reliability:

Meet Telcordia GR1221, GR1209, and RoHS Requirements
UL94-V0 compliant
Excellent long-term stability and mechanical strength
Suitable for use between temperatures of -40°C to 85°C

Customer Collimator Example-1:

Parameter	Unit	Specification	Note
Wavelength	nm	1030-1064nm	
Insertion loss	dB	0.35 Max	
Working distance	mm	210mm	from collimator to beam waist
Beam diameter (1/e2)	um	530	1/e2 of peak intensity at beam waist
Fiber type		Nufern LMA-GDF-10/125-M	Double-clad fiber
Polarization extinction ratio	dB	NA	slow-axis over fast-axis
Backreflection	dB	< -60	AR coating, working range as specified above
Optical power handling	mW	CW >10W,	
Operating temperature	°C	-5 to +70	
Fiber length	mm	> 600	
Fiber connector		None	
Package	mm	SS steel of \varnothing 5.0 xL17mm	

