

Collimator with Single or Dual Fibers

Optical Transmitters and Receivers for optical communications

The EM4 Fiber collimator module is designed for both single and dual fiber applications with a large clear aperture and diffraction-limited wavefront error.

The module contains a single/dual fiber assembly with precision aligned lens. The package is bonded with materials that meet outgassing standards for space operations. The module can be utilized as both a transmitter and receiver. The device meets performance requirements in vacuum conditions.



Features

- High reliability/ durability
- 2W power handling capacity
- High coupling efficiency
- High polarization extinction ratio
- Near-Gaussian output beam

Applications

- Space communications
- Aerospace & Defense
- Multiplex systems

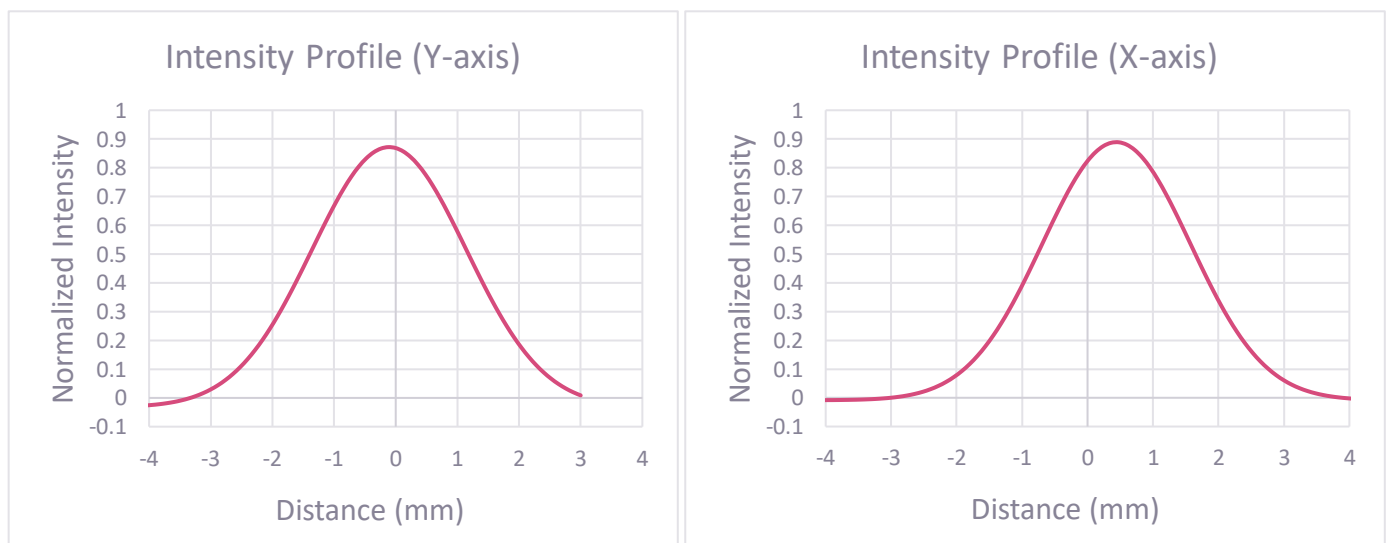
Optical Performance Characteristics

	Symbol	Min	Typical	Max	Unit
Wavelength range	λ		1550		nm
Optical input power	P_{in}		.5	2	W
Coupling efficiency	CE	70	75	78	%
Polarization extinction ratio	PER	20	22	25	dB
Wavefront error (measured @ 1550nm & 25°C)	WFE		.022	.025	waves
Beam Waist	ω		10		mm
Lens focal length	f		50		mm
Return loss	RL	-55	-60		dB
Dual fiber field angle separation	θ	n/a	13	17	mrاد
Survival temperature	T_{sv}	-40		85	°C
Operating temperature	T_{op}		25		°C
Weight	w		.2		lbs

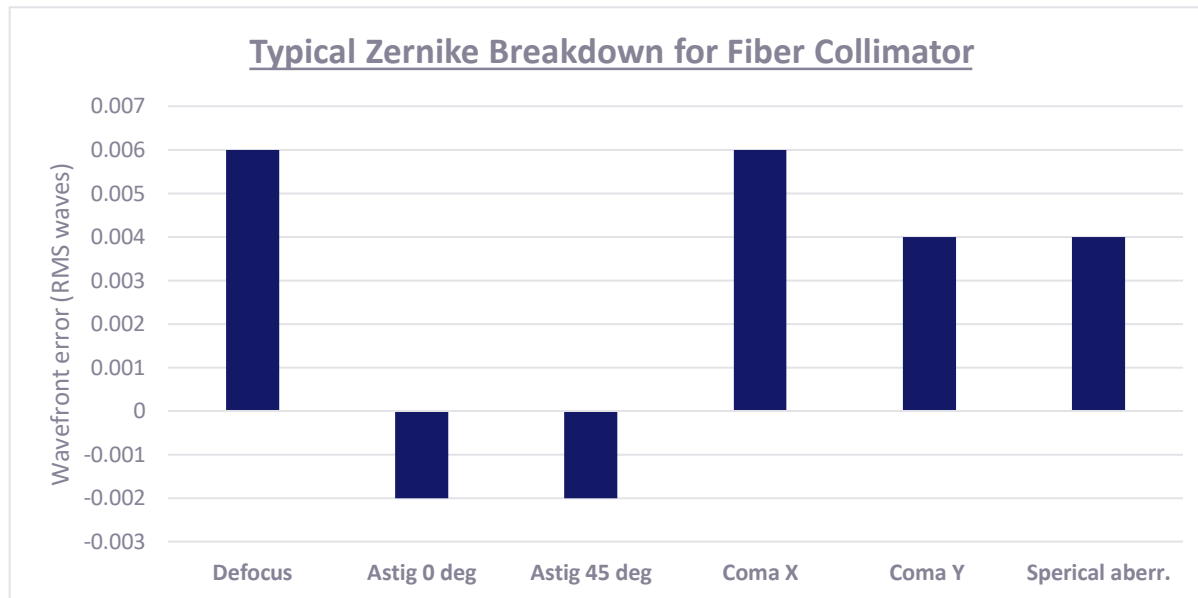
*Customization available upon request

Performance data

Beam profile at output of collimator:



Zernike aberration breakdown:



Ordering information

Order code

E	M	5	9	0	-	①	②	-	1	5	5	0	-	③	-	④	-	⑤
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①	Fiber type channel 1	SM	PM
	Code	0	1
②	Fiber type channel 2	No Fiber	SM
	Code	0	1
③	Fiber Length	1 meter min, 2 meter max	
	Code	1	
④	Connector ¹	FC/APC	FC/PC
	Code	0	1
⑤	Strain Relief Boot	Boot included	No Boot included
	Code	0	1

For further information

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