

The logo for Princetel, featuring the word "Princetel" in a white, italicized, sans-serif font on a blue square background.

Large Beam Fiber Optic Collimator



www.princetel.com

Princetel, Inc.
4 Princess Rd Ste 209
Lawrenceville, NJ 08648
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Large Beam Fiber Optic Collimator

Description

There are many types of fiberoptic collimators available commercially. Most of them are based on the successful GRIN lenses, which have helped the previous telecommunication boom. However, GRIN lenses are not very suitable for visible wavelengths or large beam collimation. Our high performance collimators employ high quality aspheric lenses to achieve low wave-front distortion, low divergence, and diffraction limited beam quality.

These collimators are not only ideal for target shooting at long distances but also good for pair coupling at long working distances. Princetel's advanced collimator technology allows us to offer our customers large-beam (>4 mm) collimators suitable for free-space optics communications. Use these collimators with our standard laser-diode light source, pigtailed diode lasers, or receptacle laser diode modules.

Specifications

Characteristics	Model CLA	Model CLB	Model CLD	Model CLC
Wavelength	635-1650 nm			
Beam size (1/e ² with SM fiber)	1 mm	2.5 mm	4.5 mm	4-13* mm
Far field divergence (1310 nm)	1 mrad	0.5 mrad	0.3 mrad	-
Focal length	4.5 mm	11 mm	19 mm	17 mm
Lens type	Asphere (AR)			Sphere (AR)
Insertion loss (SM pairing)	<0.5 dB (for 1310 and 1550 nm only)			-
Max pairing distance	0.25 m	1 m	4 m	-
Return loss (SM fiber)	>55 dB			
Operating temperature	0 to 65 C			
Storage temperature	-40 to 85 C			
Package materials	Stainless steel			Anodized AL
Fiber choices	Singlemode, multimode, or PM			
Fiber jackets	900 um tight buffer or loose tubing			
Connector types	FC/PC, SC/PC, ST, LC, FC/APC, SC/APC			

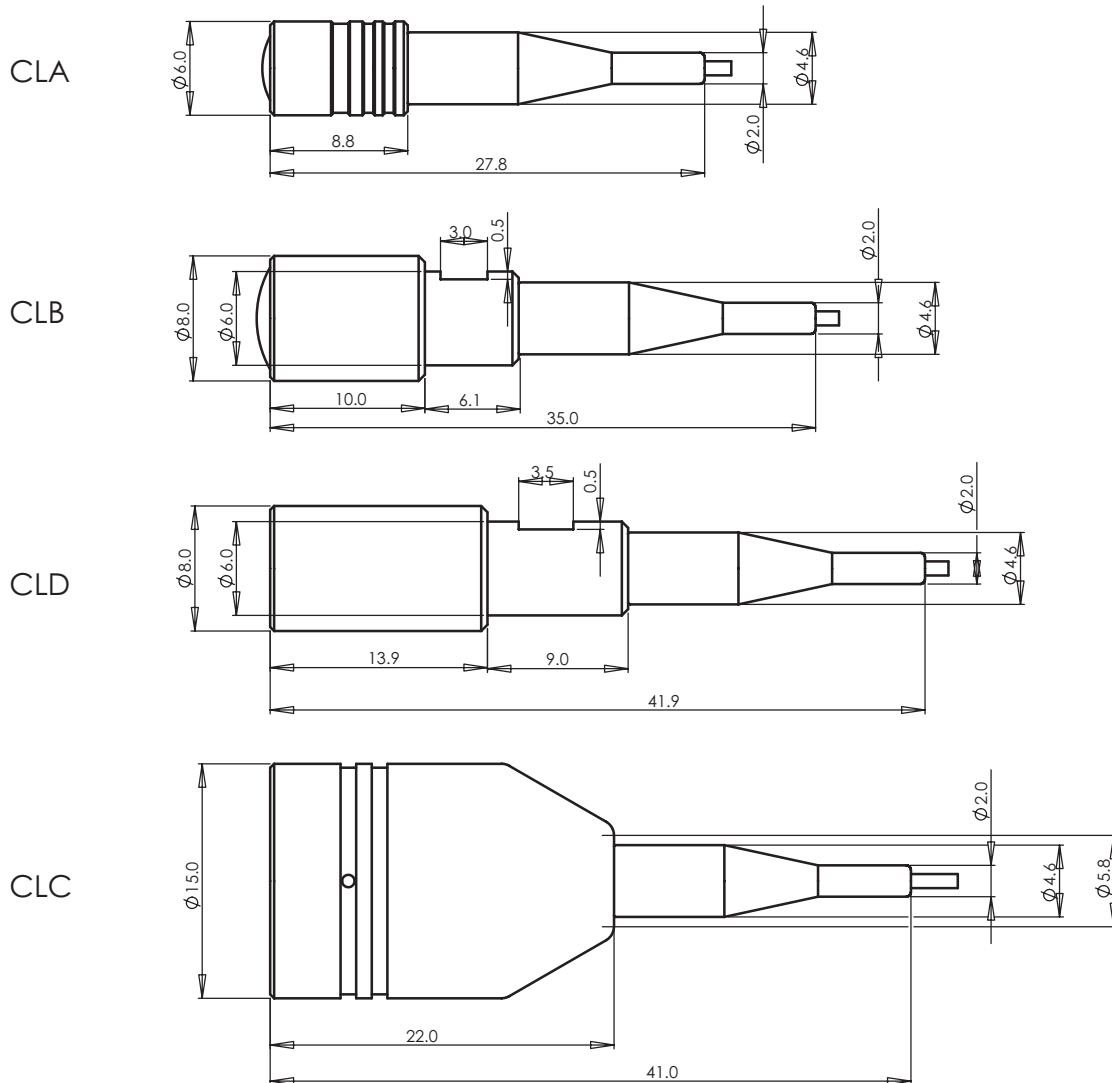
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Mechanical



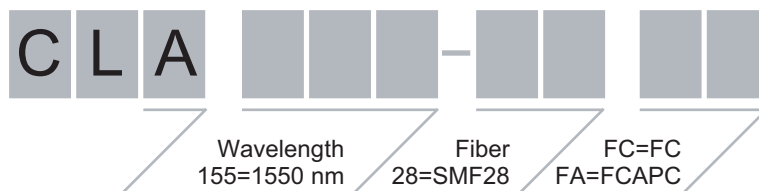
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Part Number



A=1 mm beam*
 B=2.5 mm beam*
 D=4.5 mm beam*
 C=4-13 mm beam**

* Beam size based on SM fiber ** NA related

Wavelength and Fiber Code

Wavelength	Fiber
165=1625 nm	28=Corning SMF28 (1290=1650 nm)
162=1625 nm	13=Fujikura SM13 PANDA fiber
159=1590 nm	15=Fujikura SM15 PANDA fiber
155=1550 nm	56=3M FS-SN5624 (980 nm)
153=1530 nm	42=3M FS-SN4224 (850 nm)
148=1480 nm	32=3M FS-SN3224 (635 nm)
131=1310 nm	50=50/125 multimode
980=980 nm	62=62.5/125 multimode
850=850 nm	10=100/140 multimode
780=780 nm	20=200/240 multimode
670=670 nm	40=400/425 multimode
650=650 nm	60=600/630 multimode
635=635 nm	01=1000 um Mitsubishi plastic

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