

Collimator Assemblies

Our standard Fiber Optic Collimators employ plano-convex lenses positioned at their focal length from the optical fiber tip. The standard collimators use SMA female connectors for ease of coupling to standard 0.22 N.A. fiber optic cables. For light exiting from an optical fiber, collimators expand the beam and decrease the divergence by the ratio of the fiber core diameter to the collimator aperture.

Ex. A 100 μ m core diameter fiber with an N.A. of 0.22 has an output divergence of $\pm 12.7^\circ$. When coupled to an LC-4, its divergence is reduced to $0.100/4.00 \times \pm 12.7^\circ \approx \pm 0.3^\circ$ at its center wavelength.

Conversely, light entering the collimator will be focused into the fiber.



Part Number	Wavelength Range	Aperture	Housing length
LC-4N	380-2200nm	4mm	6.35mm(.25") O.D. x 23.25mm
LC-4U	170-2400nm	4mm	6.35mm(.25") O.D. x 23.25mm
LC-10N	380-2200nm	10mm	19.0mm(.75") O.D. x 40mm
LC-10U	170-2400nm	10mm	19.0mm(.75") O.D. x 40mm
LC-22N	380-2200nm	22mm	31.75mm(1.25") O.D. x 60mm
LC-22U	170-2400nm	22mm	31.75mm(1.25") O.D. x 60mm

Refocusing Assemblies

Our UV-Vis and Vis-NIR Refocusing Assemblies are offered for the LC-4, LC-10, and LC-22 series collimators. These single-element cells thread into the collimator, refocusing the beam at a given distance. Standard refocusing assemblies are listed below. Other focal lengths and AR coated optics are available on a custom basis.

OTHER AVAILABLE OPTIONS : FC, ST and SC connectors, .25" ferrules; Operation with other N.A.'s such as 0.12, 0.26, 0.37, and 0.40; AR coated optics for > 98% transmission at peak wavelength.

Part Number	Wavelength Range	Focal length	Aperture	Housing length
LF-4N5	380-2200nm	5mm	4mm	0.25" O.D. x 0.25"
LF-4N10	380-2200nm	10mm	4mm	0.25" O.D. x 0.25"
LF-4N15	380-2200nm	15mm	4mm	0.25" O.D. x 0.25"
LF-4U10	170-2400nm	10mm	4mm	0.25" O.D. x 0.25"
LF-4U15	170-2400nm	15mm	4mm	0.25" O.D. x 0.25"
LF-4U20	170-2400nm	20mm	4mm	0.25" O.D. x 0.25"
LF-10N20	380-2200nm	20mm	10mm	0.75" O.D. x 0.50"
LF-10N25	380-2200nm	25mm	10mm	0.75" O.D. x 0.50"
LF-10N40	380-2200nm	40mm	10mm	0.75" O.D. x 0.50"
LF-10U20	170-2400nm	20mm	10mm	0.75" O.D. x 0.50"
LF-10U25	170-2400nm	25mm	10mm	0.75" O.D. x 0.50"
LF-10U40	170-2400nm	40mm	10mm	0.75" O.D. x 0.50"
LF-22N40	380-2200nm	40mm	22mm	1.25" O.D. x 1"
LF-22N50	380-2200nm	50mm	22mm	1.25" O.D. x 1"
LF-22N75	380-2200nm	75mm	22mm	1.25" O.D. x 1"
LF-22U40	170-2400nm	40mm	22mm	1.25" O.D. x 1"
LF-22U50	170-2400nm	50mm	22mm	1.25" O.D. x 1"
LF-22U75	170-2400nm	75mm	22mm	1.25" O.D. x 1"

Note : Refocusing Assemblies mate to Collimator Assemblies; they do not mount directly onto fiber optic cables.