Infinite Conjugate Microscope Objective Lenses

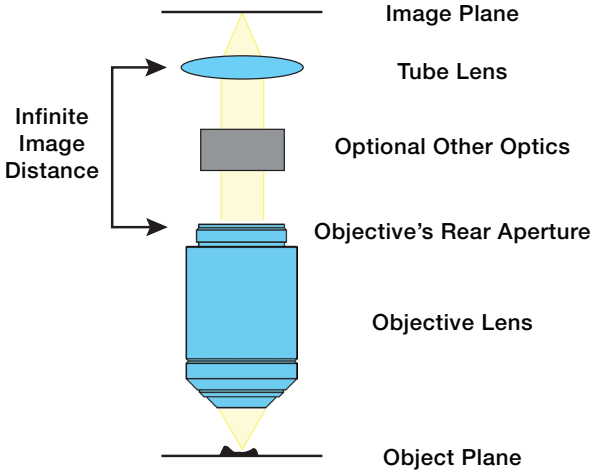
Infinity corrected plan achromatic microscope objectives are ideal for collimating and focusing laser beams in the visible spectrum. High precision optical fabrication and assembly in a class 10,000 cleanroom, make these lenses excellent choices for standard laboratory applications.

- Easily collimate and focus beams
- Infinity corrected objectives
- Great inexpensive general purpose lens
- Visible AR coated

Features

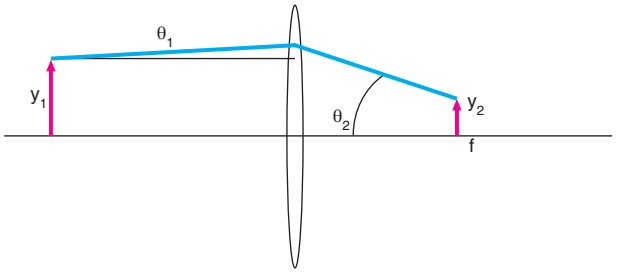
Infinity Corrected Objective Lens

Infinity corrected objectives are used in a wide variety of imaging and laser focusing applications. Light rays leaving the objective's rear aperture are collimated, so that for imaging applications, a secondary lens (usually called a tube lens) is needed in order to focus the collected light from the specimen onto the sensor. The labeled magnification is calculated, assuming the objective is being used with a tube lens of a particular focal length by design. When a tube lens of a different focal length is used, the magnification will need to be adjusted accordingly. As an advantage over finite conjugate objective lenses, a variety of auxiliary optical components, such as optical filters and polarizers can be inserted between the infinity objective lens and the tube lens without altering how the beam propagates and forms the image down the optical path. In laser applications such as optical tweezers and laser cutting, laser beams entering the rear aperture of an infinity objective can be tightly focused to a diffraction-limited spot, providing concentrated optical power and excellent resolution.



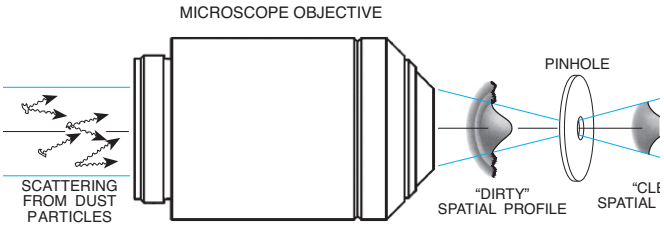
Ideal for Focusing and Collimating

Designed for diffraction limited performance across the entire visible spectrum, our LIO series objectives allow collimated laser beams to be focused to a small spot size. Our microscope objectives are broadband AR coated so that maximum about of light will be transmitted.



Spatial Filtering Applications

The LIO series of microscope objectives can be used with the 900 spatial filter system. By selecting an objective and corresponding pinhole, the laser beam can be spatial filtered such that the output beam quality is better. For a tutorial on spatial filters see Spatial Filter Technical Note.



Model	NEW LIO-4X	NEW LIO-10X	NEW LIO-20X	NEW LIO-40X	NEW LIO-60X
Magnification	4x	10x	20x	40x	60x
Numerical Aperture	0.1	0.25	0.4	0.65	0.85
Effective Focal Length (EFL)	45 mm	18 mm	9 mm	4.5 mm	3 mm
Working Distance	15 mm	10.8 mm	1.5 mm	0.8 mm	0.3 mm
Wavelength Range	400-700 nm	400-700 nm	400-700 nm	400-700 nm	400-700 nm
Design Tube Lens Focal Length	180 mm	180 mm	180 mm	180 mm	180 mm
Field Number	22 mm	22 mm	22 mm	22 mm	22 mm
Cover Glass Thickness	0.17 mm	0.17 mm	0.17 mm	0.17 mm	0.17 mm
Thread Type	0.800-36 RMS	0.800-36 RMS	0.800-36 RMS	0.800-36 RMS	0.800-36 RMS

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