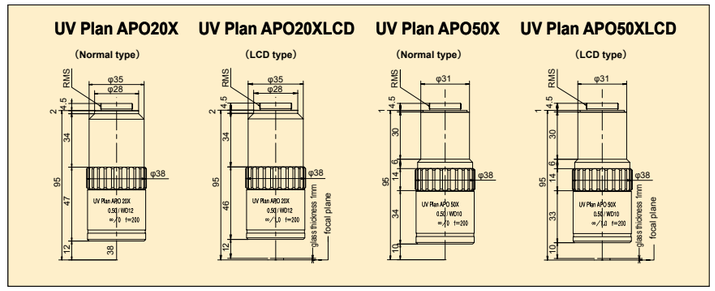
UV Plan APO 20X・50X

Super long working distance, Near Ultraviolet objective lens

Bright field super-long working distance objective lens.
The focal plane is corrected for both Bright Field and Near UV (355nm), meaning both wavelengths will be in focus. System is optimized for high transmission at 355nm, such that a microscope fitted with a yag laser can be used for repair of semiconductor and LCD circuits.



■Specification

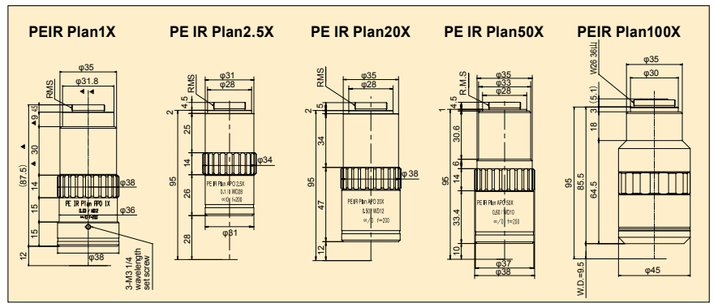
Model#	UV PlanAPO 20×	UV PlanAPO 50×
Magnification	20×	50×
Working distance	12mm	10mm
Focal length (f)	10mm	4mm
N.A	0.5	0.5
Resolution	0.6μm	0.6μm
Depth of focus (±D.F)	1.1μm	1.1μm
Wavelength	345-1064nm	
Maximum allowable laser energy	0.1J/cm² @532nm Pulse width 10nsec	0.1J/cm² @532nm Pulse width 10nsec
	0.047J/cm² @355nm Pulse width 10nsecc	0.028J/cm²@355nm Pulse width 10nsec
Glass correction	−/1.0mm(LCD)	−/1.0mm(LCD)
Weight	435g	510g

Note : Resolution and focal depth of objective lens is calculated using the wavelength of (λ=0.55nm). R=0.61x0.55/N.A Focal depth ±D (μm) = λ / (2 (N.A)²)

PE IR Plan 1X・2.5X・20X・50X・100X

Near IR lens for Photo emission application

Long working distance and high resolution objective lens with high spectral transmission percentage. Ideal for inspection of wafer backside and photo emission application. 20X and 50X can be attached to PS-888L microscope, and used for laser repair with YAG laser (wavelength 1064nm).
Note: LCD and silicon corrected lens are also available.



■Specification

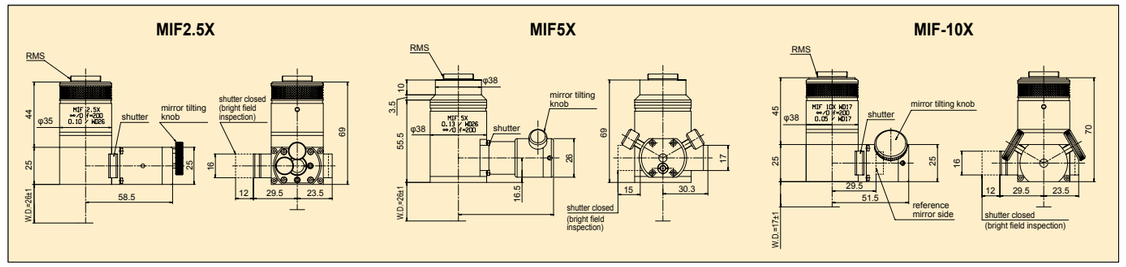
Model#	PE IR Plan 1X	PE IR Plan 2.5X	PE IR Plan 20X	PE IR Plan 50X	PE IR Plan 100X
Magnification	1X	2.5X	20X	50X	100X
Working distance	12mm	28mm	12mm	10mm	10mm
Focal length (f)	200mm	80mm	10mm	4mm	2mm
N.A	0.03	0.1	0.5	0.6	0.75
Resolution	22.4μm	6.7μm	1.3μm	1.1μm	0.9μm
Depth of focus (±D.F)	611μm	55μm	2.2μm	1.5μm	0.9μm
Transmission over 70%	800nm-1600nm	450nm-1600nm	800-1600nm	900nm-1600nm	900nm-1400nm
Glass correction	—	—	-/1.0mm(LCD)	-/1.0mm(LCD)	—
Weight	420g	300g	430g	500g	560g

Note : Resolution and focal depth of objective lens is calculated using the wavelength of (λ=0.55nm). R=0.61x0.55/N.A Focal depth ±D (μm) = λ / (2 (N.A)²)

Michelson Interferometer Objective Lens

MIF series

The interference objective operates by splitting the input optical beam into two beams at beam splitter. The path length for the beam reflected of the flat sample and reference mirror are set to be identical.Height variations in the sample produce phase variations which manifests as interference fringes. Fringe intensity is analyzed to determine sample's height variations.



※Lenses are customizable. Please confer with us for the details such as with/without shutter or abjustment of reference mirror.
The refelectance ratio for the reference mirror can be tailored for the object.

■Specification

Model #	MIF 2.5X	MIF 5X	MIF 10X
Magnification	2.5X	5X	10X
Working distance	26mm	26mm	17mm
Focal distance (f)	80mm	40mm	20mm
N.A	0.1	0.13	0.05
Resolution	3.4μm	2.6μm	6.7μm
Focal depth (±D.F)	27.5μm	16.3μm	220μm
Wavelength	486-656nm	486-656nm	486-656nm
Reference mirror accuracy	λ/20	λ/20	λ/20
Parfocal distance	95mm	95mm	95mm

※Resolution power = 0.61Xλ/N.A. Focal depth±D = λ/(2(N.A.)²)

Long Working Distance Type MIF-ULWD

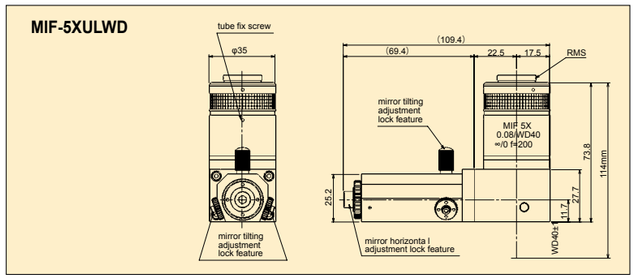
MIF-ULWD

5X, long working distance objective lens with WD40mm.
Option to increase depth of focus to view an object which has uneven surface or long length.

■Specification

Model #	MIF 5X ULWD
Magnification	5X
Working distance	40mm
Focal distance (f)	40mm
N.A	0.08
Resolution	4.2μm
Focal depth (±D.F)	42.9μm
Wavelength	486-656nm
Reference mirror accuracy	λ/20
Parfocal distance	114mm

※Resolution power = 0.61Xλ/N.A. Focal depth±D = λ/(2(N.A.)²)



Linnik Interferometer Objective Lens

LIF series

Lenses are customizable. Please confer with us.