Near Ultra-violet (NUV) / Infrared (NIR) Objective Lenses | NUVOL /NIROL

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This is a high NA infinity correction objective lens for laser processing (femtosecond laser and third harmonic of YAG laser). You can also observe the laser beam coaxially with a laser processed surface that is designed to reduce the aberration of the visible wavelength.

- With its long working distance and field curvature corrected, its natural observation image is obtained to the periphery of the visual field.
- It is the long working infinity correction function that is used to introduce a laser system and coaxial observation.
- It is also used for the observation of near ultra-violet and infrared light.

Guide

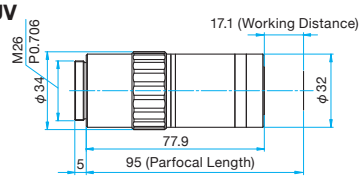
- Available for fxed objective lens holder (OLH-20.32, OLH-26) Reference D033
- When the objective lens is fixed to a 2 axis holder, please consult our International Sales Division.
- For laser processing, it is available in dichoric block (DIMC) and for laser unit with coaxial illumination and observation (OUCI-2). Reference B014

Attention

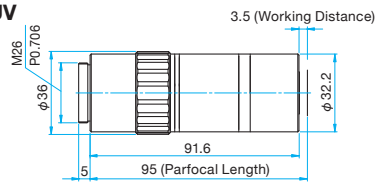
- When an objective lens is used in laser processing, use the diameter of the incident beam to extend to a size of half the pupil diameter ($1/e^2$). A small light spot cannot be achieved when the incident beam is too narrow. Please note if there is a laser energy density increase, there will be a high possibility of damage to the objective lens.
- The surface of an objective lens can be contaminated by splashes during processing. To avoid this, please have sufficient working distance (WD) and insert a thin protective glass on the objective.
- If the incident laser beam femtosecond is below 100fs, there is a possibility that the pulse width will spread.
- Magnification is the value when using the imaging lens f=200mm. When used in a microscope lens barrel from other manufacturers may have different magnifications. The actual magnification should be calculated from the ratio of the focal length of the objective lens and the focal length of the imaging lens to verify the focal length of the imaging lens barrel to be used.

Outline Drawing (in mm)

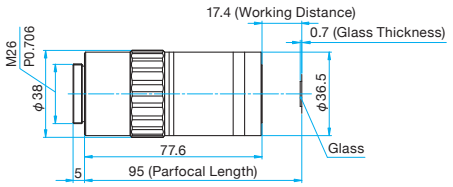
NUVOL-20-NUV



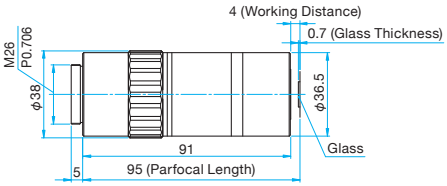
NUVOL-50-NUV



NIROL-20-NIR



NIROL-50-NIR



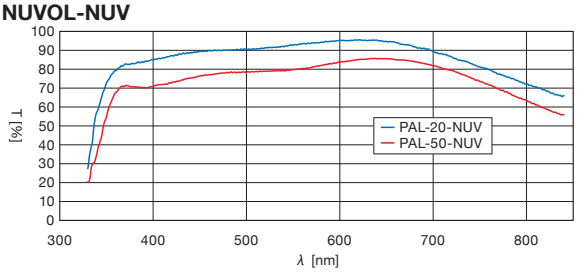
Specifications

Part Number	Type	Magnification	Numerical aperture (NA)	Working distance (WD) [mm]	Focal length f [mm]	Resolution [μm]	Focal depth [μm]	Pupil diameter [mm]	Imaging device field of view (1/2-inch) [mm]	Weight [kg]
NUVOL-20-NUV	Near-ultraviolet	20	0.40	17.1	10	0.7	±1.7	8.0	0.24×0.32	0.30
NUVOL-50-NUV	Near-ultraviolet	50	0.70	3.5	4	0.4	±0.6	5.6	0.10×0.13	0.34
NIROL-20-NIR	Near-infrared	20	0.45	17.2 (at Air)	10	0.6	±1.4	9.0	0.24×0.32	0.34
NIROL-50-NIR	Near-infrared	50	0.80	3.8 (at Air)	4	0.3	±0.4	6.4	0.10×0.13	0.44

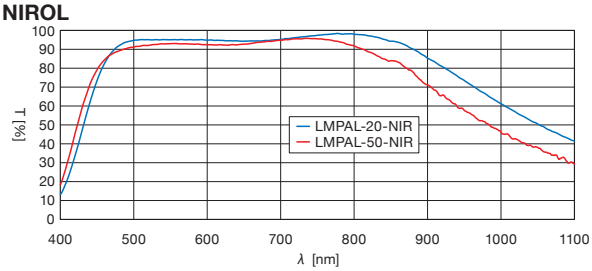
Typical Transmittance Data

T: Transmission

NUVOL-NUV



NIROL



Compatible Optic Mounts

OLH-26