Long Working Distance Objective Lenses | NOL/LWDOL

RoHS

Application Systems
Machine Vision
Manual Positions
Motion Control Products
Optical & Mirror Holder
F A Parts
Measurement &Control
FA Electrical Parts
Tool & Measure
Cleanroom & AntiStatic
Index

Mirrors
Beamsplitters
Filters
Polarizers
Lenses
Multi-Element Optics
Prisms
Substrates & Windows
Holder & Vibration isolator

With its long working infinity correction function, this objective lens can be used for a laser system and coaxial observation.
To focus visible laser or microscopic observation of objects from a distance.

- Chromatic aberration is corrected in the visible range (400 – 700nm).
- Two types of parfocal distance are available, 45mm and 90mm.
- This parfocal 95mm lens has a long working distance and a corrected field curvature. Its natural observation image is obtained to the periphery of the visual field.
- It is possible to improve the response speed in the driving mechanism of the 45mm parfocal objective lens (FPS-OBL/FPS-OBL); with a lightweight auto focusing solution. Reference I108

Guide

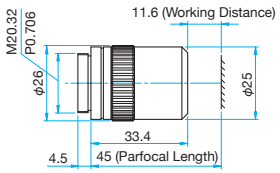
- Available for fxed objective lens holder (OLH-20.32, OLH-26) Reference D033
- When the objective lens is fixed to a 2 axis holder, please consult our International Sales Division.
- For laser processing, it is available in dichoric block (DIMC) and for laser unit with coaxial illumination and observation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

Attention

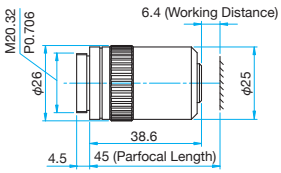
- When an objective lens is used in laser processing, use the diameter of the incident beam to extend to a size of half the pupil diameter ($1/e^2$). A small light spot cannot be achieved when the incident beam is too narrow. Please note if there is a laser energy density increase, there will be a high 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.
- 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)

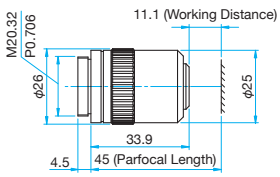
NOL-5



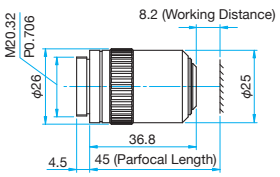
NOL-10



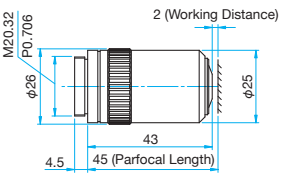
NOL-20



NOL-50



NOL-100



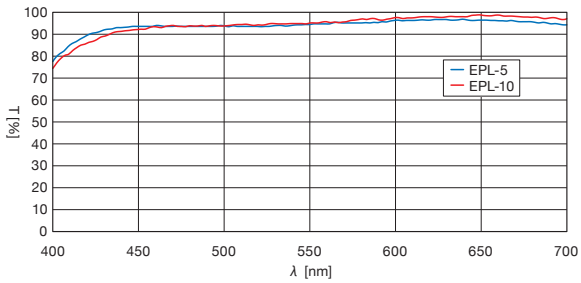
Parfocal Length 45mm

Part Number	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]
NOL-5	5	0.13	11.6	40	2.0	±16.3	10.4	0.96×1.28	0.09
NOL-10	10	0.3	6.4	20	0.9	±3.1	12.0	0.48×0.64	0.09
NOL-20	20	0.4	11.1	10	0.7	±1.7	8.0	0.24×0.32	0.09
NOL-50	50	0.55	8.2	4	0.5	±0.9	4.4	0.10×0.13	0.10
NOL-100	100	0.8	2.0	2	0.3	±0.4	3.2	0.05×0.06	0.11

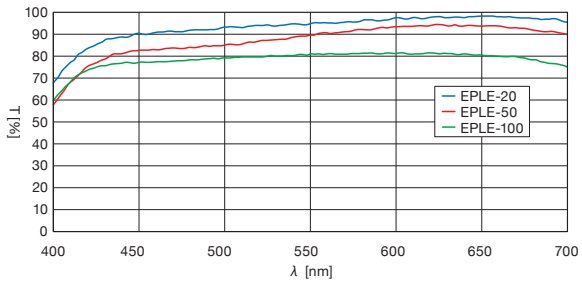
Typical Transmittance Data

T: Transmission

NOL-5/10



NOL-20/50/100



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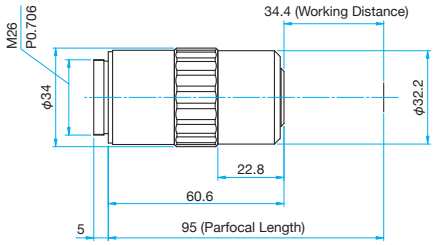
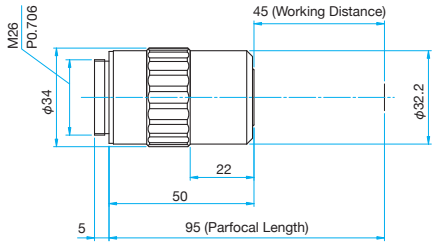
Outline Drawing (in mm)

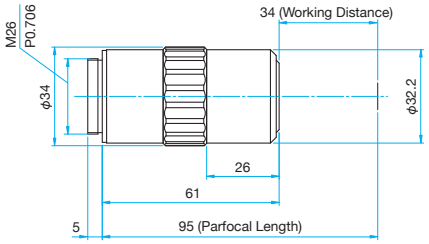
LWDOL-2



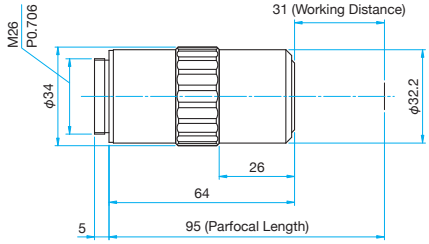
LWDOL-5



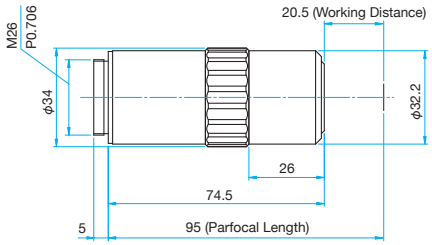
LWDOL-10



LWDOL-20



LWDOL-50

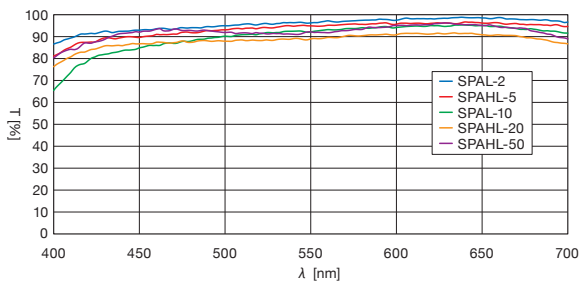


Parfocal Length 95mm

Part Number	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]
LWDOL-2	2	0.055	34.4	100	5	±91.0	11.0	2.4×3.2	0.22
LWDOL-5	5	0.13	45.0	40	2	±16.3	10.4	0.96×1.28	0.17
LWDOL-10	10	0.28	34.0	20	1	±3.5	11.2	0.48×0.64	0.19
LWDOL-20	20	0.29	31.0	10	0.9	±3.3	5.8	0.24×0.32	0.22
LWDOL-50	50	0.42	20.5	4	0.7	±1.6	3.4	0.10×0.13	0.25

Typical Transmittance Data T: Transmission

LWDOL



Compatible Optic Mounts

OLH-20.32, -20.32A / TPOH-18OA + TPOH16RO / OLH-26