Ultra-violet Objective Lenses | PFL-UV-AG

RoHS Catalog Code W3459

This objective lens can be used for laser machining using pulsed laser of SHG (532nm) YAG laser and FHG (266nm) YAG. Chromatic aberration is suppressed in both the visible and UV laser wavelength, achieving a high transmittance.

- 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 ultra-violet light.
- Laser Damage Threshold (Typical) 0.09 J/cm^2 (266nm), 0.2J/cm^2 (532nm)
  (Laser pulse width 10ns, repetition frequency 20Hz)

Guide

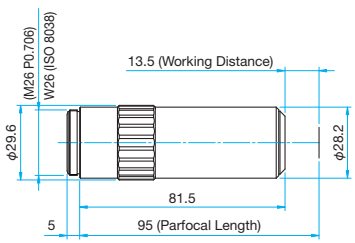
- Available fixed objective lens holder (LHO-26).
  WEB Reference Catalog Code W4024
- When the objective lens is fixed to a 2 axis holder, please consult our Sales Division.
- For laser processing, we offer a dichoric block (DIMC) and for laser unit with coaxial illumination and observation (OUCI-2).
  WEB Reference Catalog Code W2041

Attention

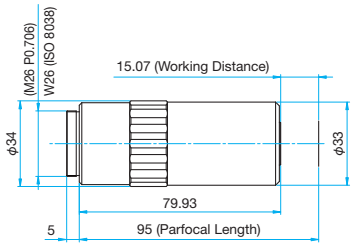
- When an objective lens is used in laser processing, use the diameter of the incident beam to extend to a size of half the pupil diameter (1/e^2). A small light spot cannot be achieved when the incident beam is too narrow. Please note if there is a laser energy density increase, there will be a high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

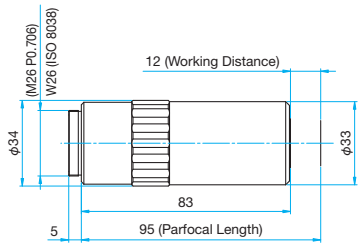
PFL-10-UV-AG



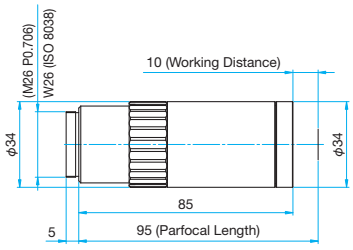
PFL-20-UV-AG-A



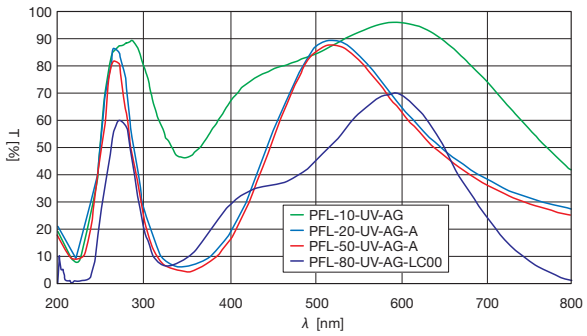
PFL-50-UV-AG-A



PFL-80-UV-AG-LC00



Typical Transmittance Data T: Transmission



Specifications

Part Number	Item name	Magnification	Focal length f [mm]	Numerical aperture NA	Working distance WD [mm]	Resolution (λ=550nm) [μm]	Focal depth (λ=550nm) [μm]	Real field of view (Eyepiece φ24mm) [mm]	Real field of view (Imaging device 1/2-inch) [mm]	Weight [kg]
PFL-10-UV-AG	MPlan UV 10x	10x	20	0.20	13.5	1.4	±6.9	φ2.4	0.48×0.64	0.30
PFL-20-UV-AG-A	MPlan UV 20x	20x	10	0.36	15.07	0.76	±2.1	φ1.2	0.24×0.32	0.35
PFL-50-UV-AG-A	MPlan UV 50x	50x	4	0.42	12.0	0.65	±1.6	φ0.48	0.10×0.13	0.41
PFL-80-UV-AG-LC00	MPlan UV 80x	80x	2.5	0.55	10.0	0.50	±0.9	φ0.30	0.06×0.18	0.35

Compatible Optic Mounts

LHO-26