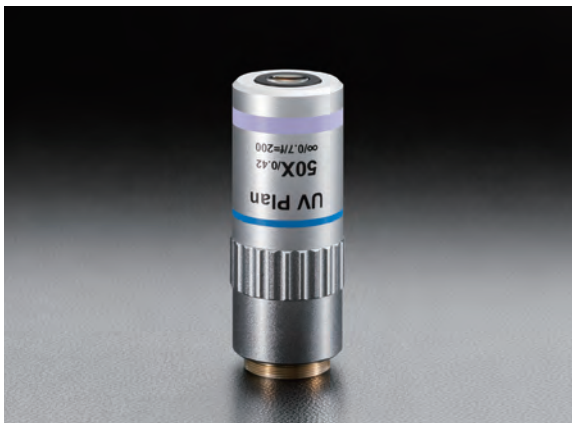
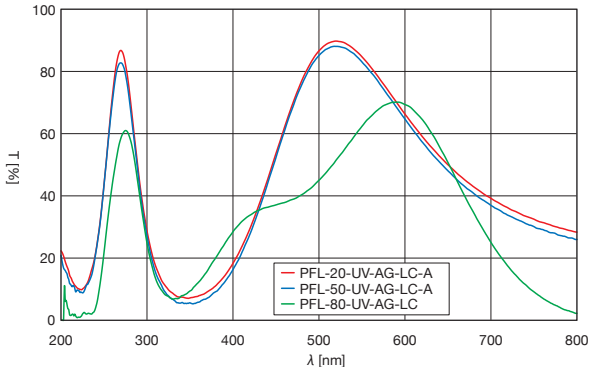
Glass Thickness Compensation Ultra-violet Objective Lenses | PFL-UV-AG-LC RoHS

PFL-UV-AG-LC series are objective lenses of which magnification cover 20X,50X and 80X. They can be used in a laser processing machines which is using 266nm and 532nm YAG pulse laser. Its glass-thickness- compensation optical design makes it possible to realize an ideal beam spot size and quality even if it was processed thorough a cover glass. These objective lenses will well match with a laser repair processing for LCD or OLED module.

- Two kinds objective lenses are available. They are designed to correct aberration depending on the thickness of cover glass.(t= 0.7 mm and 1.1 mm)
- 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(reference): 0.09 J/cm^2 (266nm), 0.2J/cm^2 (532nm)
  (Laser pulse width: 10ns, repetition frequency: 20Hz)



Typical Transmittance Data T: Transmission



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, WEB Reference Catalog Code W2012

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.
- When the thickness of cover glass is not same as the specified, designed specifications may not be achieved due to aberration.
- 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.

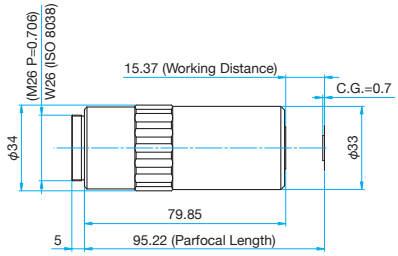
Specifications

Part Number	Item name	Magnification	Focal length f [mm]	Numerical aperture NA	Working Distance W.D. [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-20-UV-AG-LC07-A	LCD Plan UV 20x (t0.7)	20×	10	0.36	15.15	0.76	±2.1	φ1.2	0.24×0.32	0.35
PFL-20-UV-AG-LC11-A	LCD Plan UV 20x (t1.1)	20×	10	0.36	15.20	0.76	±2.1	φ1.2	0.24×0.32	0.35
PFL-50-UV-AG-LC07-A	LCD Plan UV 50x (t0.7)	50×	4	0.42	11.99	0.65	±1.6	φ0.48	0.10×0.13	0.40
PFL-50-UV-AG-LC11-A	LCD Plan UV 50x (t1.1)	50×	4	0.42	11.99	0.65	±1.6	φ0.48	0.10×0.13	0.40
PFL-80-UV-AG-LC07	LCD Plan UV 80x (t0.7)	80×	2.5	0.55	9.78	0.50	±0.9	φ0.3	0.06×0.08	0.30
PFL-80-UV-AG-LC11	LCD Plan UV 80x (t1.1)	80×	2.5	0.55	9.65	0.50	±0.9	φ0.3	0.06×0.08	0.35

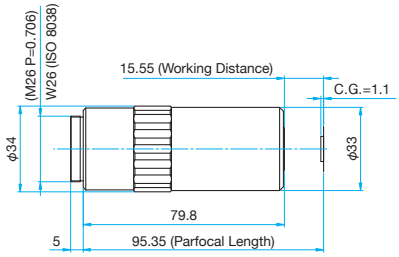
Outline Drawing

(in mm)

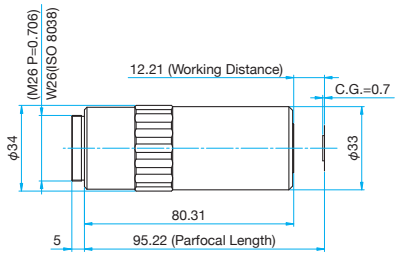
PFL-20-UV-AG-LC07-A



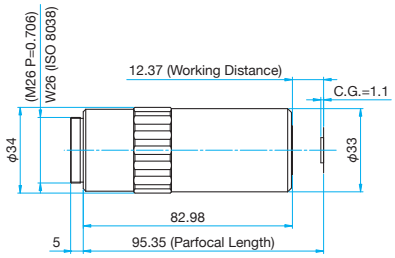
PFL-20-UV-AG-LC11-A



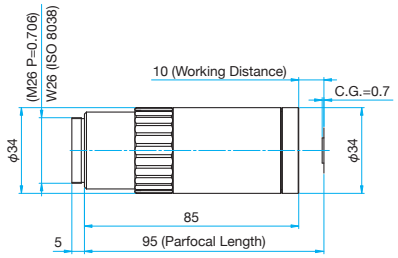
PFL-50-UV-AG-LC07-A



PFL-50-UV-AG-LC11-A



PFL-80-UV-AG-LC07



PFL-80-UV-AG-LC11