

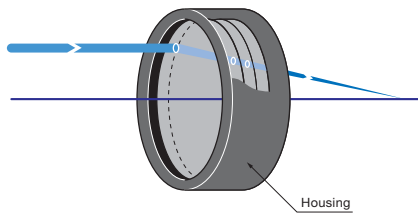
These lenses contain elements which have different refractive indexes and produce a high degree of correction across a bandwidth of 200 - 400nm.

They can be used as a laser focusing lens for broadband ultra-violet sources.

- NA 0.1 or below (ETL model NA 0.25) can be focused to the diffraction limit.
- No adhesive or heat absorption materials are used to produce these lenses and they show high resistance to ultra-violet light.
- These are not achromatic corrective but offers correction on spherical and comatic aberration.

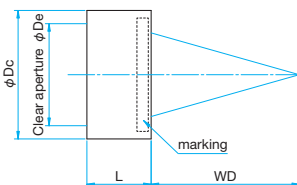


Schematic



Outline Drawing

(in mm)



- Tolerance Diameter $\phi Dc \pm 0.1$
- Length $L \pm 0.2$
- Focal length $\pm 2\%$

Specifications

Material	Synthetic fused silica for Excimer Laser – Calcium fluoride (CaF ₂)
Material of frame	Aluminum Finishing: Black anodized
Design wavelength	200nm, 308nm, 400nm
Coating	Uncoated
Acceptance angle	$\pm 1^\circ$

Guide

- ▶ Products that are not listed in the table or in the catalog such as high pulse lasers or different wavelengths are available upon request, please contact our Sales Division.
- ▶ We can provide catalog and custom lenses in large volume to your specifications.
- ▶ For details on focal length of each wavelength, please see details on our web site. [▶ WEB Reference](#) [Catalog Code](#) W3083

Attention

- ▶ These focusing lenses are made for use to image an object located in an infinite distance or using a point of source as a parallel light.
- ▶ The correct direction to input a parallel light is the side with barrel lettering. If the direction is wrong, the spherical aberration will be increased and the image unfocused.
- ▶ If Focusing lens is used with the designed wavelength the spherical aberration and transmission will be poor.
- ▶ Usage with high power laser or near a high temperature light source, the high heat build-up in the lens may alter the focal length. To avoid this, heat prevention is required.
- ▶ To reduce the focus spot size, ensure that the input beam diameter ($1/e^2$) is reduced to half of the effective diameter of the focus lens.
- ▶ These focusing lenses are not chromatic lenses; they are not optically corrected.
- ▶ The lenses have 3 to 4% of reflectivity per surface; therefore about 13% of loss is expected in transmission.

Specifications

Part Number	Focal length f [mm]	Diameter ϕDc [mm]	Clear aperture ϕDe [mm]	Length L [mm]	Numerical aperture (NA)	Working distance (WD) [mm]
UDL-30-50P	50.4	$\phi 34$	$\phi 27$	17	0.27	39.3
UDL-30-80P	80.0	$\phi 34$	$\phi 27$	14	0.17	72.4
UDL-30-100P	100.1	$\phi 34$	$\phi 27$	13	0.14	92.5
NUDL-30-150P	151.5	$\phi 34$	$\phi 27$	16	0.09	137.1
NUDL-30-200P	200.3	$\phi 34$	$\phi 27$	16	0.07	185.2
UDL-40-80P	80.3	$\phi 44$	$\phi 37$	17	0.23	70.1
NUDL-40-100P	100.0	$\phi 44$	$\phi 37$	18	0.19	87.7
NUDL-40-150P	149.0	$\phi 44$	$\phi 37$	18	0.12	134.4
NUDL-40-200P	201.2	$\phi 44$	$\phi 37$	18	0.09	185.5
NUDL-40-250P	249.7	$\phi 44$	$\phi 37$	19	0.07	230.7
UDL-50-100P	100.8	$\phi 54$	$\phi 47$	20	0.24	89.1
NUDL-50-150P	149.7	$\phi 54$	$\phi 47$	21	0.16	136.3
NUDL-50-200P	200.0	$\phi 54$	$\phi 47$	22	0.12	179.9
NUDL-50-250P	252.4	$\phi 54$	$\phi 47$	21	0.09	233.0
NUDL-50-300P	300.9	$\phi 54$	$\phi 47$	22	0.08	278.8

Compatible Optic Mounts

LHF-UDL-30 / -40 / -50

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