# HOURS

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# Excimer Laser Focusing Lenses

ELFL/DELFL/NELFL RoHS

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## Schematic



**M34 P=0.75** aperture \$27

Clear

Clear aperture \$47

4

M50.9 P=0.75

**54+01** 



Filters

Mirrors

Polarizers

Lenses

Element Optics Prisms

Substrates & Windows

## Holder & Vibration isolator



#### Specifications Material Synthetic fused silica for Excimer Laser Design wavelength 248nm Coating No coating Acceptance angle ±1°

## Guide

These lenses are manufactured with a synthetic fused silica material and it has a high transmittance

value in the ultra-violet wavelength of 180 – 400nm. They have excellent performance and ideal for

focusing and imaging applications. There is no adhesive or heat absorption material used to

• They are made of 2 or 3 spherical lenses and they offer correction on spherical and comatic aberration.

produce these lenses, they show high resistance to the ultraviolet light.

M34 P=0.75 ¢ 36±0.15

WD

 Tolerance Length L±0.2 Focal length ±2%

I +0 2

4 WD

0KI

Standard focal lengths for Excimer laser with 248nm, 266nm and 355nm.

• NA 0.1 or below (ETL model NA 0.25) can be focused to the diffraction limit.

- Products that are not mentioned in this catalog such as high pulse laser use or different wavelength are available on request, please contact our International Sales Division.
- nce) C151 Protection window is sold separately. Ref
- For detail on focal length of each wavelength, please see our web site. WEB Reference Catalog Code W3082

## Attention

- These focusing lenses are made for use to image an object located in an infinitive distance or using a point of source as a parallel light. Near distance of an image will not produce any good optical result.
- The correct direction to input a parallel light is on the top side of the SIGMA KOKI letters. If the direction is wrong, the spherical aberration will be big and the image unfocused.
- If the wavelength is applied in-correctly, the spherical aberration and transmission will be bad
- Usage with high power laser or near 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/e2) 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 4% of reflectivity; therefore about over 20% of loss is expected in transmission.

Specifications				
Part Number	Focal length f [mm]	Length L [mm]	Numerical aperture (NA)	Working distance (WD) [mm]
ELFL-30-40P	39.6	22	0.34	31.1
ELFL-30-50P	49.8	22	0.27	41.6
ELFL-30-60P	59.7	22	0.23	52.4
ELFL-30-80P	79.8	22	0.17	73.2
NELFL-30-100P	99.9	12	0.14	94.6
NELFL-30-150P	149.3	12	0.09	144.6
NELFL-30-200P	199.3	12	0.07	194.7
DELFL-50-100P	100.4	20	0.24	87.1
DELFL-50-150P	149.6	20	0.16	137.9
DELFL-50-200P	199.1	20	0.12	187.9
DELFL-50-250P	249.0	20	0.09	238.0
DELFL-50-300P	249.0	20	0.08	288.0

# ELFL-30/NELFL-30

DELFL-50