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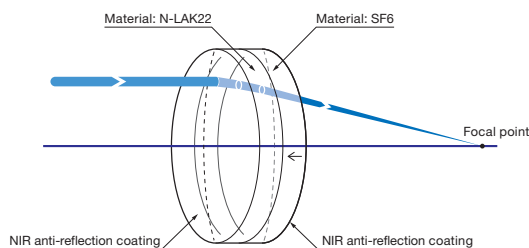
By bonding two lenses with wavelength dispersion of different refractive index the resulting component will provide reduced spherical aberration and chromatic aberration than that of a single spherical lens.

These achromatic lenses can be used as a focusing lens for YAG laser (1064nm) or LD of the near-infrared.

- The lens design is optimized so that the focal length change is minimized in the near infrared region. The focal length matches at 700nm, 880nm, 1100nm wavelengths and is optimized to minimize aberrations.
- It is suitable as a collimating lens not only because chromatic aberration but also spherical aberration is collected.

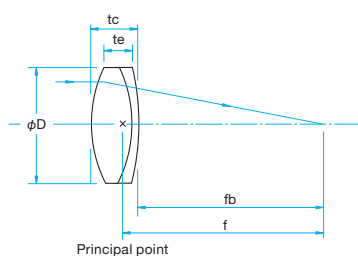


Schematic



Outline Drawing

(in mm)



- Tolerance Diameter $\phi D_{\pm 0.1}$
- Thickness $tc \pm 0.2$
- Focal length $\pm 2\%$ (880nm)

Specifications

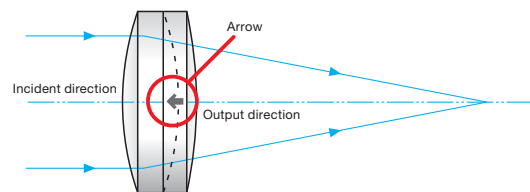
Material	N-LAK22, SF6
Design wavelength	700nm, 880nm, 1100nm
Coating	Multi-layer anti-reflection coating (700 – 1550nm)
Cement	Ultraviolet Hardened Adhesive
Laser Damage Threshold	0.3J/cm ²
Surface Quality (Scratch-Dig)	40-20
Clear aperture	90% of actual aperture

Guide

- ▶ For product other diameter size or focal lengths which are not listed on our website or in our catalog, please contact our Sales Division with your requests.
- ▶ The design and manufacture of achromatic lens of other wavelength bands are available upon requested.
- ▶ Focusing Lenses for Fiber Lasers (HFTLSQ/HFDLSQ) are also available. [Reference](#) B182

Attention

- ▶ Please use achromatic lens when focusing an image at infinity or when making parallel light from the one point of light source. It does not provide sufficient optical performance when used in such as short-range distance imaging.
- ▶ There is a direction to the incident light parallel to the achromatic lens. A surface with a small radius of curvature is allowed to be incident parallel light from a rear surface (the surface the arrow is pointing to). When it is incident parallel light from the opposite side, spherical aberration and chromatic aberration will occur and the focused spot size will increase.
- ▶ When used in the visible region, spherical aberration and chromatic aberration increases. In addition, the transmittance decreases.



Specifications

Part Number	Diameter ϕD [mm]	Focal length f [mm]	Edge Thickness t_e [mm]	Center Thickness t_c [mm]	Back focal length f_b [mm]	Centration [']
DL-15-20PNIR	$\phi 15$	19.9	6.6	9.5	14.7	<3
DL-15-25PNIR	$\phi 15$	25.0	5.8	8.1	20.6	<3
DL-15-30PNIR	$\phi 15$	30.1	5.6	7.4	26.0	<3
DL-15-50PNIR	$\phi 15$	50.2	4.9	5.9	46.8	<3
DL-25-30PNIR	$\phi 25$	30.0	10.8	16.3	21.4	<3
DL-25-40PNIR	$\phi 25$	40.1	9.3	13.2	32.8	<3
DL-25-50PNIR	$\phi 25$	50.2	8.5	11.6	43.8	<3
DL-25-100PNIR	$\phi 25$	100.4	7.2	8.7	95.1	<3

Compatible Optic Mounts

LHF-15S, -25S