



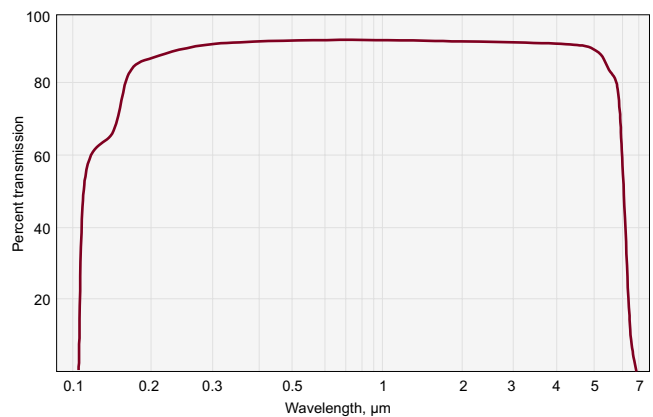
UV & IR Optics

LITHIUM FLUORIDE (LiF) COMPONENTS

- **Optically isotropic, medium hard, hygroscopic, insoluble in water**
- **Wide transmission range from 150 nm to 6,000 nm**

Lithium fluoride crystals are well-suited for manufacturing of optical elements (mirrors, windows, lenses) for UV, visible and IR applications.

LiF is very useful for x-ray monochromators and for the study of fundamental properties and defects in crystals.



External transmission of LiF window of 10 mm thickness.

PHYSICAL PROPERTIES

Crystal type	cubic
Lattice constant, Å	a = 4.026
Density, g/cm ³	2.64
Melting point, °C	870
Refractive index @ 1.0 μm	n = 1.387
Transmission band, μm	0.15–6

SPECIFICATIONS FOR LiF WINDOWS

Material	optical quality LiF crystal ($\Delta n/cm < 0.5 \times 10^{-5}$)
Spectral range	UV, VIS, IR
Surface quality	60–40 scratch & dig
Clear aperture	90% of the diameter
Diameter tolerance	+0.0 -0.1 mm
Thickness tolerance	±0.2 mm
Surface flatness	$\lambda/4$ @ 633 nm
Parallelism	< 3 arcmin

LiF lenses, Brewster windows, prisms are available upon request.

Catalogue number	Diameter, mm	Thickness, mm	Substrate	Price, EUR
510-5253	25.4	3.0	UV grade LiF	102
510-5384	38.1	4.0	UV grade LiF	215
510-5506	50.8	6.0	UV grade LiF	315

Please contact us for other size, shape or precision requirements.

HOUSING ACCESSORIES

- **Optical Component Mount 830-0037**
See page 5.46

