

Lithium Fluoride

德硅凯氟
DESIOPTOE

LiF Datasheet

DESIOPTOE is a professional fluoride crystal supplier. DESIOPTOE's excellent crystal growth technology ensures the continuous production of high-quality LiF crystals, making it widely suitable for optical applications of various wavelengths.

Lithium fluoride crystals have excellent transmittance at 0.12 μ m-7 μ m, and the transmittance of lithium fluoride crystals in the vacuum ultraviolet band is the highest among known optical materials.

Lithium fluoride can be used as windows, prisms, and lenses in the vacuum ultraviolet, visible, and infrared bands. With the development of deep ultraviolet technology in recent years, lithium fluoride crystals have attracted more and more attention due to its high transmittance and short cut-off wavelength in the deep ultraviolet band.

KEY ADVANTAGE

Excellent broadband transmittance

High laser durability

Low stress birefringence

Excellent UV transmittance

High refractive index homogeneity

Physical Properties

Crystal Structure	Cubic
Cleavage Plane	(100)
Lattice Constant	a=4.026
Molecular Weight	25.9394 g/mol
Density	2.635 g/cm ³
Melting Point	870 °C
Solubility	0.27 g/l H ₂ O at 20 °C

Thermal Properties

Heat Capacity	1562 J/kg . K
Thermal Conductivity	11.3 @314K
Linear Thermal Expansion Coefficient	37.0 10 ⁻⁶ /°C

Mechanical Properties

Young's Modulus	(GPa)	64.79
Poisson Ratio	μ	0.22
Knoop Hardness		102 (600g)

Refractive Indices

n=1.3921

v_d=97.29

DESIOPTOE LiF Crystal Transmission

Uncoated sample, uncorrected for surface effects

