Hilger Crystals
A Dynasil Company

CRYSTAL MATERIALS INDEX

Lithium Fluoride

LiF

Lithium fluoride is used as a diffracting crystal in X-ray spectrometry. It has a large energy gap and its crystals are transparent to short wavelength ultraviolet radiation.

Properties	Value
Absorption Coefficient (cm-1)	5.9x10-3 at 4.3µ
Apparent Elastic Limit (MPa)	11.2
Bulk Modulus (K) (GPa)	62.03
Cleavage Planes	(100)
Density (g.cm-3)	2.64
Dielectric Constant	0.1
Elastic Coefficient C11	112
Elastic Coefficient C12	46
Elastic Coefficient C44	63.5
Hardness (knoop)	108
Melting Point (K)	1121
Poisson Ratio	0.326
Reflection Loss (%)	5.2 at 0.6µ
Refractive Index	1.40 at 0.6µ
Restrahlen Peak (µ)	25
Shear Modulus (G) (GPa)	55.14
Solubility (g/100g H_2O)	0.27 at 293K
Specific Heat Capacity (J·kg·m-1·K-1)	1562
Stability	Stable
Structure	Cubic
Thermal Conductivity (W·m-1·K-1)	11.3 at 314K
Thermal Expansion (K-1 at 300K)	37x10-6
Transmission Range (µ)	0.12-8.5
Youngs Modulus (E) (GPa)	64.97

sales@hilger-crystals.co.uk| +44-1843-231166