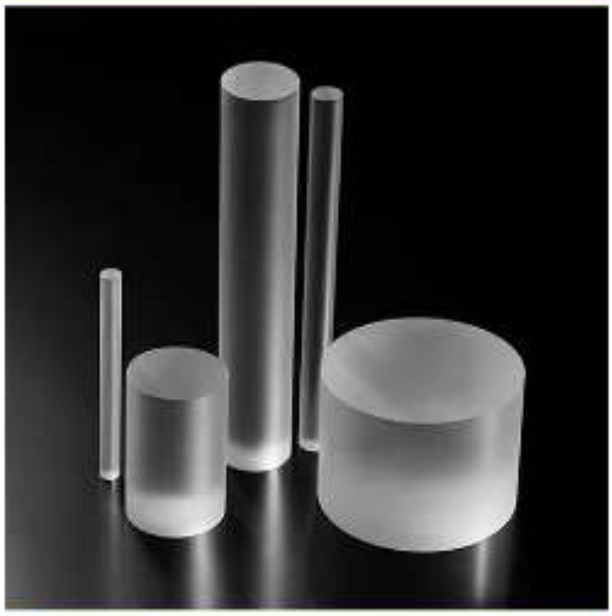
UM OPTICS
EXPANDING YOUR SPECTRO-VISION

Lithium Fluoride(LiF)

SPECIFICATIONS



Lithium fluoride (LiF) crystals have the smallest refractive index among commonly used infrared optical materials, and its transmission spectrum ranges from 110nm to 7000nm, and is commonly used as lenses, prisms and windows for thermal imaging systems, aerospace optical systems and excimer laser optical systems.

OPTICAL

Transmission Range,microns	0.11-7
Transmittance,at 0.6 μm	>94.8%
Reflection Loss at 0.6μm(double-sided)	5.2%
Absorption Coefficient at 4.3μm	5.9×10^{3}
Structure	Cubic Crystal System
Cleavage Planes, direction	<100>

THERMAL

Melting Point [℃]	848
Thermal Conductivity, [W/(m×K)]	11.3 @ 304K
Thermal Expansion [10^{-6}/K]	37.0@ 283k
Specific Heat Capacity [J/(kg×K)]	1562

MECHANICAL

Density[g/cm^3]	2.639
Dielectric Constant	9.0 @ 1MHz
Young's Modulus (E) [GPa]	64.79
Shear Modulus(G) [GPa]	55.14
Bulk modulus(K) [GPa]	62.03
Poisson Coefficient	0.22

CHEMICAL

Molecular Weight / g/mol	25.9394
Solubility in water at 20℃	2.7g

REFRACTIVE INDICEX

Wavelength(um)	Index
0.2	1.439
0.5	1.3943
1.0	1.3871
2.0	1.3788
3.0	1.3666
4.0	1.3494
5.0	1.3266
6.0	1.2975
7.0	1.262
8.0	1.218
9.0	1.165
10.0	1.101