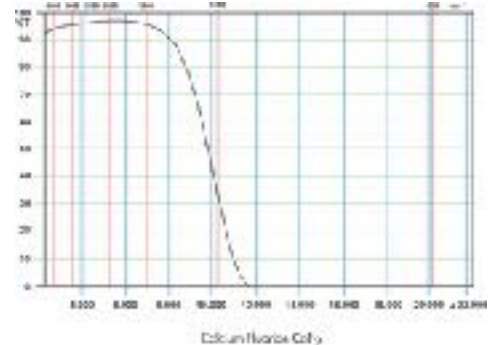
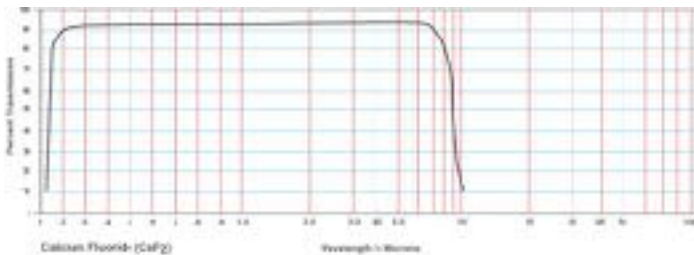


# Optical Material Calcium Fluoride (CaF<sub>2</sub>) Optical Crystals

Calcium Fluoride (CaF<sub>2</sub>) is commonly sold in two (2) grades - IR grade and UV grade. UV grade CaF<sub>2</sub> is more expensive. CaF<sub>2</sub> is used in lens for cameras, photolithography and IR spectroscopy

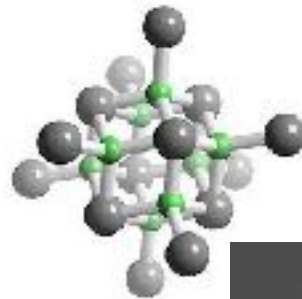


## Optical Properties - Calcium Fluoride (CaF<sub>2</sub>) Optical Crystals

Transmission Range: 130nm to 9μm  
Refractive Index: 1.40 @ 5μm  
Reflection Loss: 5.4% @ 5μm ( 2 surfaces)

## Physical Properties - Calcium Fluoride (CaF<sub>2</sub>) Optical Crystals

Melting Point: 1360° C  
Hardness (Knoop): 158 psi  
Young's Modulus: 75.8 GPa  
Modulus of Rupture: 5300 psi  
Structure: Cubic---111 cleavage plane



## Chemical Properties-- Calcium Fluoride (CaF<sub>2</sub>) Optical Crystals

Solubility: 0.0017gm./100 gm water @ 20° C. Insoluble in most bases and acids. Soluble in NH<sub>4</sub> salts

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*future in focus...*