

CALCIUM FLUORIDE (CaF₂)

Refrac Index (n) vs Wavelength (λ)

Wavelength (μm)	Refractive Index
0.149	1.5800
0.161	1.5490
0.195	1.5000
0.200	1.4950
0.222	1.4800
0.248	1.4680
0.266	1.4621
0.280	1.4584
0.300	1.4540
0.337	1.4481
0.400	1.4419
0.486	1.4370
0.588	1.4339
0.656	1.4325
0.687	1.4320
0.728	1.4314
0.884	1.4298
1.014	1.4288
1.100	1.4283
1.250	1.4275
1.650	1.4256
1.900	1.4244
2.058	1.4236
2.450	1.4214
2.700	1.4199
2.800	1.4192
3.050	1.4175
3.400	1.4149
4.000	1.4096
4.400	1.4014
5.000	1.3991
5.304	1.3952
5.893	1.3871
6.483	1.3782
7.072	1.3681
7.661	1.3570
8.251	1.3444
8.840	1.3308
9.429	1.3161

Optical Properties

Refractive Index	1.39908
Thermal co-efficient of Refractive Index	-10.6 x 10 ⁻⁶
Transmission Range	0.2 – 9.0 μm

Thermal Properties

Thermal Linear Expansion	18.85 x 10 ⁻⁶ /K
Thermal Conductivity	9.71 W m ⁻¹ K ⁻¹
Specific Heat Capacity	854 J Kg ⁻¹ K ⁻¹
Melting Point	1360 °C

Mechanical Properties

Density	3.18 g/cc
Knoop Hardness	158.3
Young Modulus	75.8 GPa
Shear Modulus	33.77 GPa
Poisson Ratio	0.26

Calcium Fluoride

for 10mm Thickness

