

CALCIUM FLUORIDE (CaF₂) COMPONENTS

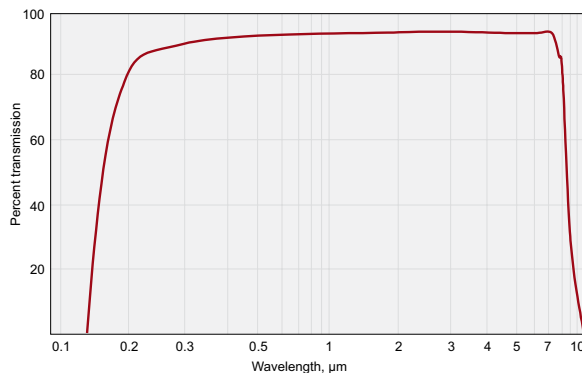
- Useful transmission over the spectral range from 0.2 to 8.0 microns
- Low solubility

Two grades of materials are available: one for UV and the other for IR applications. Low solubility and a wide transmission range makes it useful for many applications, including:

- mirror substrate for UV laser systems;
- substrate for manufacturing windows, lenses for UV, IR applications.

Due to its composition CaF₂ has a much longer useful life than most materials when used in a fluorine environment.

CaF₂ lenses, windows, mirrors, prisms, beamsplitters and beamselectors are available upon request.



External transmission of CaF₂ window of 10 mm thickness.

PHYSICAL PROPERTIES

Crystal type	cubic
Lattice constant, Å	a = 5.462
Density, g/cm ³	3.18
Melting point, °C	1360
Refractive index @ 1.0 μm	n = 1.4289
Transmission range, μm	0.13 – 10

CaF₂ Windows

SPECIFICATIONS

Material	optical quality CaF ₂ crystal (Δn/cm < 0.5×10 ⁻⁵)
Spectral range	UV, VIS, IR
Surface quality	40-20 scratch & dig (MIL-PRF-13830B)
Clear aperture	90% of the diameter
Diameter tolerance	+0.0 -0.13 mm
Thickness tolerance	±0.2 mm
Surface flatness	λ/4 @ 633 nm
Parallelism	3 arcmin
Maximum available size of optical components up to dia	120 × 20 mm

Catalogue number	Diameter, mm	Thickness, mm	Substrate	Price, EUR
530-5253	25.4	3.0	UV grade CaF ₂	96
530-5385	38.1	5.0	UV grade CaF ₂	190
530-5506	50.8	6.0	UV grade CaF ₂	310
530-6253	25.4	3.0	IR grade CaF ₂	84
530-6385	38.1	5.0	IR grade CaF ₂	99
530-6506	50.8	6.0	IR grade CaF ₂	175
530-6710	70.0	10.0	IR grade CaF ₂	230

Please contact us for other size, shape or precision requirements.

IR grade CaF₂ protective windows for spectroscopy application (optically polished)

SPECIFICATIONS

Material	optical quality CaF ₂ crystal (Δn/cm < 0.5×10 ⁻⁵)
Surface quality	80-50 scratch & dig (MIL-PRF-13830B)
Clear aperture	90% of the diameter
Diameter tolerance	+0.0 -0.13 mm
Thickness tolerance	±0.2 mm
Surface flatness	optically polished
Parallelism	<10 arcmin

Catalogue number	Diameter, mm	Thickness, mm	Substrate	Price, EUR
530-6121	12.0	1	IR grade CaF ₂	5

HOUSING ACCESSORIES

Flipping Mirror / Beamsplitter Mounts 840-0155

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