

CaF₂ Windows for Ultraviolet and Infrared Laser

OPCFU/OPCF

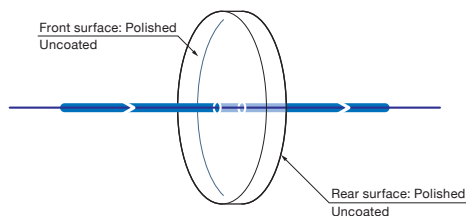
RoHS

The CaF₂ (Calcium Fluoride) crystal windows offer superior transmission in broad wavelength range from vacuum ultraviolet (130nm) to Infra-red (8μm).

- These CaF₂ windows contain low impurities and assure a high transmission in the UV regions.
- High durability in a high humidity environment when compared to other glass materials.
- CaF₂ is an isotropic type of optics, there is no birefringence.

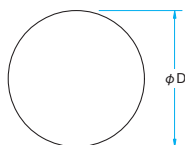


Schematic



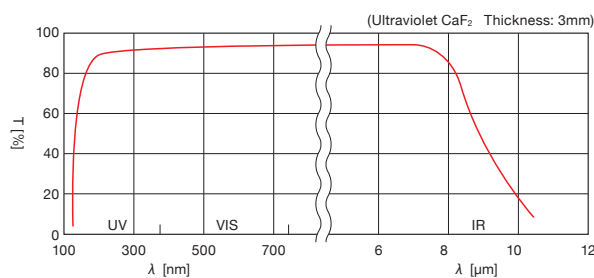
Outline Drawing

(in mm)



- Tolerance Diameter $\phi D_{\pm 0.1}$
- Thickness $t \pm 0.1$

Typical Transmittance Data T: Transmission



Ultraviolet – Near infrared

Part Number	Diameter φD [mm]	Thickness t [mm]	Wavelength Range [nm]
OPCFU-20C01-P	φ20	1	130 – 8000
OPCFU-20C02-P	φ20	2	130 – 8000
OPCFU-25C02-P	φ25	2	130 – 8000
OPCFU-25C03-P	φ25	3	130 – 8000
OPCFU-30C02-P	φ30	2	130 – 8000
OPCFU-30C03-P	φ30	3	130 – 8000
OPCFU-40C03-P	φ40	3	130 – 8000
OPCFU-40C04-P	φ40	4	130 – 8000
OPCFU-50C03-P	φ50	3	130 – 8000
OPCFU-50C05-P	φ50	5	130 – 8000

Compatible Optic Mounts

LHF-20S, -25S, -30S, -40S, -50S

Specifications

Material	Calcium Fluoride
Parallelism	<3'
Surface Quality (Scratch-Dig)	60–40
Clear aperture	90% of real diameter

Guide

- ▶ We also offer AR coating and Protective layer coating on substrates.
- ▶ For product sizes and wedges which are not listed on our website or in our catalog, please contact our Sales Division with your requests.

Attention

- ▶ CaF₂ are soft and susceptible to cracking as well as cleavage if subjected to rapid changes in temperature. They should be handled accordingly.
- ▶ Windows are offered standard with no AR coating and provide transmittance of 94% after loss of 3% for each surface.
- ▶ Wavefront reflection and transmission is not guaranteed; for interferometer and high precision optical application, please contact our Sales Division with your custom requests.

Physics

Wavelength [nm]	Refractive Index
193.5	1.502
200.0	1.496
248.4	1.467
308.0	1.453
355.0	1.446
404.7	1.442
488.0	1.437
632.8	1.433
694.3	1.432
780.0	1.430
1064	1.429
2000	1.424
3000	1.418
4000	1.410
5000	1.399
6000	1.386
7000	1.369
8000	1.350
9000	1.327
Density	3.18g/cm ³
Thermal Conductivity	9.71W·m ⁻¹ K ⁻¹
Thermal Expansion Coefficient	24×10 ⁻⁶ /°C (20 – 60°C)

Visible – Near infrared

Part Number	Diameter φD [mm]	Thickness t [mm]	Wavelength Range [nm]
OPCF-20C01-P	φ20	1	300 – 8000
OPCF-20C02-P	φ20	2	300 – 8000
OPCF-25C02-P	φ25	2	300 – 8000
OPCF-25C03-P	φ25	3	300 – 8000
OPCF-30C02-P	φ30	2	300 – 8000
OPCF-30C03-P	φ30	3	300 – 8000
OPCF-40C03-P	φ40	3	300 – 8000
OPCF-40C04-P	φ40	4	300 – 8000
OPCF-50C03-P	φ50	3	300 – 8000
OPCF-50C05-P	φ50	5	300 – 8000

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