

VPFC Series

Crystal Infrared Windows

Calcium Fluoride (CaF₂) has long been used in research applications. It performs best in controlled environments where humidity, chemical exposure, vibration and high frequency noise are minimized or eliminated.

The transmission rate characteristics of CaF₂ are suitable for higher temperature applications, shortwave and midwave thermography and for the visual spectrum. Medium to longwave transmission rates (7-14 micron) are typically between 40-50% based on the infrared (IR) camera detector sensitivities at different wavelengths.

VPFC Series (Viewing Pane Fixed Crystal) IR windows are specially coated to reduce the transmission drift due to moisture/humidity. However, industrial users are strongly encouraged to investigate the VPT Series of industrial-grade IR windows which are specifically designed for stability in harsh industrial environments and have an unconditional lifetime warranty.

When purchasing crystal windows, ask for the Material Safety Data Sheet (MSDS) to ensure that the crystal does not contain hazardous substances. Some window manufacturers use crystals made of Barium Fluoride (BaF₂), a toxic substance, especially hazardous to the food and beverage industry.

Note: No crystal window meets impact and load requirements for switchgear above 1kV (IEEE C37 20.2.a.3.6).

Specifications

Materials	
Window Housing and Cover	UL 94 5VA Nylon (switchgear-grade plastic); -40°C (-40°F) to 273°C (523°F); Easy-Grip™ stainless steel cover
Optic	Calcium Fluoride Crystal (other crystal options available); -100°C (-148°F) to 1400°C (2555°F)
Gaskets	UL 94 5VA TPE; -40°C (-40°F) to 273°C (523°F)
Hardware	316 stainless steel

Other	
Useful Temperature Rating	-40°C (-40°F) to 200°C (392°F)
Water and Dust Ingress	IP65 / NEMA 4: closed and when in use

Dimensions

Model	Body Diameter	Window Diameter	Assembly Thickness
VPFC-50	9.1 cm (3.6 in)	5.1 cm (2.0 in)	2.6 cm (1.0 in)
VPFC-75	12.1 cm (4.8 in)	7.6 cm (3.0 in)	2.6 cm (1.0 in)
VPFC-100	15.1 cm (5.95 in)	10.2 cm (4.0 in)	2.6 cm (1.0 in)

Caution: The dimensions listed above are not installation dimensions. Do NOT cut prior to receiving your IRISS window and installation template.



VPFC Series Feature:

- Transparent crystal allows for visual inspection
- Compatible with all IR cameras
- UV transmission compatible with all corona cameras
- Manufactured from non-conductive UL 94 plastics insulated to 30kV/mm
- Easy-Grip™ stainless steel cover
- Available in 2", 3" and 4" sizes (actual crystal viewing area)
- Fitting instructions and templates included

Certifications:

- Certified by UL (USA) & cUL (Canada) to the following standards:
 - 50V
 - 50E
 - 508A; ANSI 508A
- IP65 / NEMA 4
- Lloyds of London Type Approval
- American Bureau of Shipping (ABS)
- BSI Quality ISO 9001 Certified System
- CSA C22.2 No. 14-13
- DNV (Det Norske Veritas) P261.1E Maritime, Vessel and Offshore Applications