

# Infrared Viewing Windows

## Conduct Thermal Scans Without Exposure to Live Components

### Why use an IR viewing window?

- Reduces risks associated with "open panel" inspections
- Thermographers are not exposed to potentially hazardous components
- Reduced need for PPE (flash hoods, Nomex, gloves, etc.)
- Reduced need for contractor escorts
- Reduced time and cost associated with thermographic surveys
- The bottom line is improved plant reliability and safety

### IRISS VPF(R) Reinforced Fixed Viewing Optics Windows

These windows combine an IR transmitting polymer window with a rigid support grating. The result is an infrared inspection port that is electrically and environmentally secure.

- **Meets IEEE Standard C37.20.2 requirements for Viewing Panes** This standard is directly applicable to metal clad switchgear up to 38 kV, and station type gear up to 7.2 kV
- NFPA 70E compliant as operators are never exposed to energized components
- IP65/NEMA 4 certified even when in use
- UL Listed and tested

### Frequently Asked Questions

- Q. How accurate is temperature measurement using a window?**  
As long as you apply proper compensation, the accuracy of your camera and temperature measurement is unaffected by use of a viewing window.
- Q. How do I adjust my camera when using a viewing window?**  
Your camera may or may not have adjustable transmission compensation. If it does, adjust the transmission compensation to the appropriate level. If your camera does not have adjustable transmission compensation, compensation can be done through emissivity adjustment.
- Q. How will windows affect the rating of my enclosure?**  
The windows are independently tested and certified to IP65 (weatherproof) both open and closed. They will not effect weatherproof ratings on enclosures.
- Q. Are the windows "arc flash rated"?**  
No. Individual components can never be rated, only complete assemblies. Keep in mind also a window is not intended to contain an arc blast. It greatly reduces the likelihood as it eliminates the common "arc flash triggers" related to open-panel inspection.
- Q. How much of the inside of the panel will I be able to see?**  
This is a function of the window size, the camera field of view, and the distance from the window to the component. Of course the camera can be held at various angles to view a larger target. Request a copy of our field of view matrix.



*Using an IR window, switchgear and components can be scanned without opening the panel. This is faster and safer than "open panel" inspections*



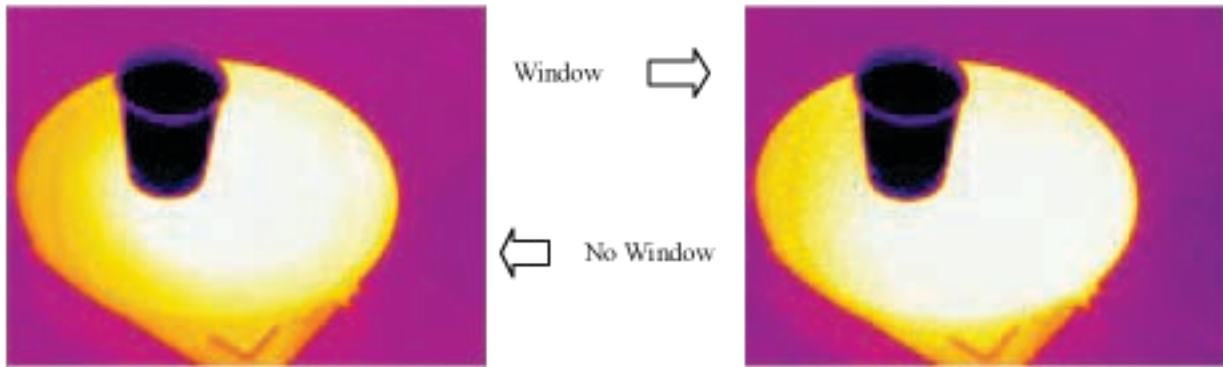
IRISS reinforced windows come in 2", 3", and 4" diameters. Each is supplied complete with mounting hardware and cover as well as an adhesive-backed drill/cutout template and window ID label.

### Two window configurations are available:

**VPFR Series** windows which utilize the IR1 polymer and viewing grate together. These windows are IP65/NEMA 4 rated, even when in use, plus they meet both the load and impact withstand specifications in IEEE C37.20.2. They are also UL tested and approved for flammability. These are the preferred windows for electrical enclosures.

**VPC Series** windows utilize mineral crystals. They are preferred for high temperature and other specialty applications. Available crystal materials include Calcium Fluoride, Sapphire, Germanium, and Zinc Selenide.

## Compare the Images



The images above are of a warm anodized skillet with a cup of ice water taken with an Electrophysics Hotshot XL IR camera. The image on the right was taken through a VPFR-100 window, the image on the left was taken without a window. There is very little difference in image quality when using the VPFR windows.

### IR Window Price List

Effective January 1, 2007

Item ID	Item Description	Price
<b><i>Reinforced Polymer Windows</i></b>		
VPFR-50	2" Reinforced Polymer IR viewing port	\$125.00
VPFR-75	3" Reinforced Polymer IR Viewing Port	\$195.00
VPFR-100	4" Reinforced Polymer IR Viewing port	\$285.00
VPF-Eval	IR Window evaluation kit Includes one of each size of window, a 4" x 4" sample sheet of the polymer, and a documentation CD	\$600.00

**VPFR Series windows are UL listed and tested to UL and CSA standards including impact and flammability tests.**

**VPFR series windows meet IEEE Standard C37.20.2 requirements for viewing panes in metal clad switchgear**

All VPFR sizes are in stock for immediate delivery

### *Calcium Fluoride Crystal Windows*

VPFC-50	2" Calcium Fluoride (CaF <sub>2</sub> ) viewing port	\$180.00
VPFC-75	3" Calcium Fluoride (CaF <sub>2</sub> ) viewing port	\$325.00
VPFC-100	4" Calcium Fluoride (CaF <sub>2</sub> ) viewing port	Sinquire