

Can IR Viewing Panes Carry an Arc Rating? The answer is NO!

No IR Viewing Pane or individual component can ever be Arc Rated or can protect you from an Arc Flash explosion:

Arc flash explosions have the potential to produce a shock blast of up to 700 miles per hour with a core temperature of up to 15,000° C!

Currently there are no infrared viewing pane lens materials that can resist these extreme levels of temperature or force.

Electrical switchgear comes in infinite shapes and sizes and as such the surface areas and volumetric elements of the cabinets are different with each model, type and rating. Switchgear companies design panel enclosures to contain and survive differing levels of arc flash energy that may be experienced for the type of equipment they will enclose.

These cabinets are then subjected to stringent tests required by certifications bodies such as IEEE, UL, CSA, and other certifying organizations. These tests are designed to test electrical switchgear cabinets for resistance to Arc Flash explosions. When assemblies are successfully tested with IR viewing panes fitted, the certification is awarded to the assembly only; this does not mean that the IR viewing pane or any other components fitted to the switchgear cabinets are Arc rated for installation to any other assembly.

Electrical cabinet designs and dimensions are infinite and we therefore CANNOT or MUST NOT use the data from one cabinet design to another design unless they are identical in every way.

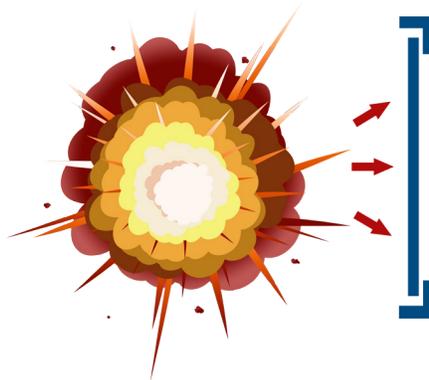
The only industry standard tests that are available to confirm the structural tests on IR windows are load, impact, and flammability. The modulus of rupture allows an engineer to design a viewing pane to resist pressure and only by using these standards can we be sure that the window we use is fit for purpose.

IRISS has ensured that our ranges of IR viewing panes have been designed and tested to the highest standards available for switchgear viewing panes, these are UL508A, UL50V, UL1558, UL746C, IEEE C.37.20.2 section a.3.6. These standards outline the impact, flammability and load test requirements for switchgear viewing panes and do not differentiate between IR or visual viewing panes.

Chapter 7 of “10 Things You Need to Know About Infrared Windows”

Contains more information on Standards & Certifications. To get your free digital copy, [Click Here](#). We have therefore subjected the IRISS® VP and CAP Series of IR viewing panes to all the test requirements outlined within these standards.

The IRISS polymer lens assemblies are the only IR transmitting lens assemblies available that meet the mandatory impact and load test requirements for viewing panes, and when installed into the high quality UL508A rated IRISS IR viewing pane assemblies produce the safest IR viewing pane available!



What Pressure could an Arc Incident produce on an IR Viewing Pane?

IMPORTANT SAFETY NOTE

IEEE C.37.20.2 section a.3.6 is a MANDATORY requirement for a load and impact test to be completed on a viewing pane and this test must be completed on BOTH sides of the Lens. If the viewing pane you intend to use does not meet this requirement it will DE-RATE the switchgear to which it is fitted.