



IW SERIES

The latest generation of
SMART Infrared Windows
for low, medium and high voltage applications.



The IW Series are fully certified and tested to the following standards: UL50, UL50V, UL1558

Manufactured from industrial grade materials proven to withstand electric arcs

Efficient 1/4 turn locking system

Intelligent multiple identification system for each individual window

Arc flash tested against a 50kA short circuit for 1 second at 11kV

The IW Series is the latest generation of SMART IR Windows from Vipirs Ltd. The IW Series infrared window operates with any thermal imager, helping take electrical inspection and predictive maintenance to a new level of safety, efficiency and accuracy.

The IW Series is manufactured from industrial grade materials designed to withstand electrical arcs and certified by Underwritten Laboratories (UL) to follow the very latest IR window standards. Install the certified, IW Series SMART IR window standards to help comply with NFPA70E electrical safety guidelines and reduce the need to wear large and bulky PPE.

Through intelligent design and special features the IW Series reduces the time it takes to perform inspections. With the 1/4 turn locking system and spring loaded cover it reduces your time per inspection.



ACOUSTIC

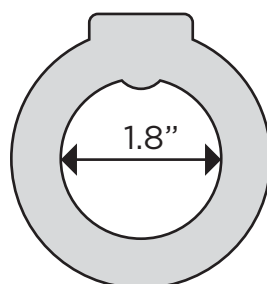


The Acoustic window is designed for ultrasound inspections. This allows maintenance professionals to detect anomalies within the electrical equipment.

Surveys of electrical equipment are a breeze thanks to the IR Windows intelligent design and clever features. VIPIRS IR Windows have built in RFID tags which enables thermographers to use an NFC reader on their mobile devices to scan the IR Windows. Each IR Window has a unique RFID tag to help identify which specific IR Window you were looking through when you found a fault. This makes it easy for tracking multiple IR Windows, and planning future inspections.

Fully removable and reusable, IR Windows outlive the life of your equipment, maximising your investment. The 1/4 turn locking system and pop-up spring-loaded cover is designed to cut down your inspection time, ensuring both reliability and longevity.

Made with industrial-grade materials, and certified by Underwriters Laboratories (UL) to meet the latest IR window standards, certified IW Series SMART IR Windows align with NFPA70E electrical safety guidelines, minimising the need for bulky PPE.



Window aperture sizes:
1.8"

Acoustic		IW Acoustic	
Viewing aperture diameter		45mm (1.8in)	
Viewing aperture area		1591mm ² (2.5in ²)	
Thickness		2mm (0.08in)	
Shortwave IR capable		Yes	
Midwave IR capable		Yes	
Longwave IR capable		Yes	
Ultraviolet (UV) capable		Yes	
Visual capable		Yes	
Fusion capable		Yes	

Certification	
Underwriters laboratories (UL) recognised	Yes
UL50	Type 1
UL746C, UL94, UL50V, UL1558	Yes

General Specification	
Maximum Temperature	Gaskets: 250°C (482°F) Body: 659°C (1218°F) Optic: 1400°C (2552°F)
Gaskets	Low smoke and fume (LSF) compliant silicone
NEMA rating	Type 1 (UL Third Party Certified)
Vibration rating	IEC60068-2-6
Humidity rating	IEC60068-2-3
Warranty	Lifetime replacement against manufacturing defects

	Window Aperture	Diameter	Depth
IW2000	45mm (1.8in)	77mm (3.0in)	19.5mm (0.8in)

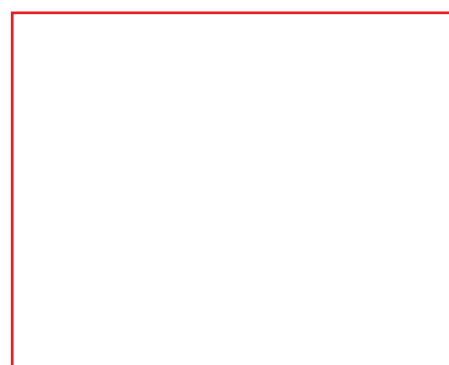
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MESH

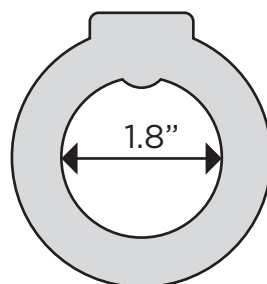


The Mesh IR Window is an industry leading, cost-effective infrared inspection solution, specifically built for safety and affordability. The IP2X mesh provides durable protection against flying debris while offering a clear, direct line of sight during inspections.

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Window aperture sizes:
1.8", 2.9", 3.7"

Mesh	IW2110	IW3110	IW4110
Viewing aperture diameter	45mm (1.8in)	73mm (2.9in)	93mm (3.7in)
Viewing aperture area	1591mm ² (2.5in ²)	4186mm ² (5.6in ²)	6794mm ² (9.79in ²)
Thickness	2mm (0.08in)	2mm (0.08in)	4mm (0.16in)
Shortwave IR capable	Yes	Yes	Yes
Midwave IR capable	Yes	Yes	Yes
Longwave IR capable	Yes	Yes	Yes
Ultraviolet (UV) capable	Yes	Yes	Yes
Visual capable	Yes	Yes	Yes
Fusion capable	Yes	Yes	Yes

Certification

Underwriters laboratories (UL) recognised	Yes	Yes	Yes
UL50	Type 1	Type 1	Type 1
UL746C, UL94, UL50V, UL1558	Yes	Yes	Yes

General Specification

Maximum Temperature	Gaskets: 250°C (482°F) Body: 659°C (1218°F) Optic: 1400°C (2552°F)
Gaskets	Low smoke and fume (LSF) compliant silicone
NEMA rating	Type 1 (UL Third Party Certified)
Vibration rating	IEC60068-2-6
Humidity rating	IEC60068-2-3
Warranty	Lifetime replacement against manufacturing defects

	Window Aperture	Diameter	Depth
IW2000	45mm (1.8in)	77mm (3.0in)	19.5mm (0.8in)
IW3000	73mm (2.9in)	103mm (4.1in)	19.5mm (0.8in)
IW4000	92mm (3.7in)	123mm (4.9in)	21.5mm (0.85in)

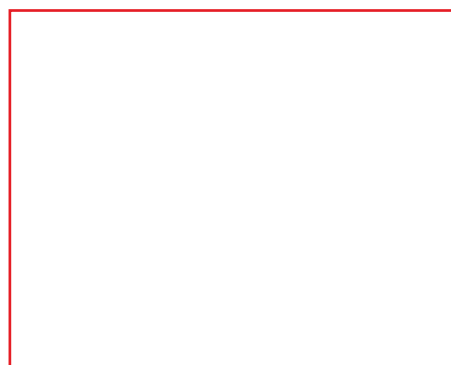
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POLYMER MESH COMPOSITE

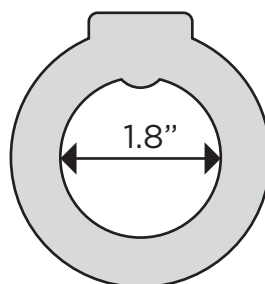


The Polymer Mesh Composite design features a safety mesh that is fully encapsulated within a polymer optic. This construction enhances resistance to harsh environments and corrosion, ensures impact and load durability, and provides stable infrared transmission. This window is favoured for its robustness.

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Window aperture sizes:
1.8", 2.9", 3.7"

Polymer Mesh Composite	IW2220	IW3220	IW4220
Viewing aperture diameter	45mm (1.8in)	73mm (2.9in)	93mm (3.7in)
Viewing aperture area	1591mm ² (2.5in ²)	4186mm ² (5.6in ²)	6794mm ² (9.79in ²)
Thickness	2mm (0.08in)	2mm (0.08in)	4mm (0.16in)
Shortwave IR capable	Yes	Yes	Yes
Midwave IR capable	Yes	Yes	Yes
Longwave IR capable	Yes	Yes	Yes
Ultraviolet (UV) capable	Yes	Yes	Yes
Visual capable	Yes	Yes	Yes
Fusion capable	Yes	Yes	Yes

Certification

Underwriters laboratories (UL) recognised	Yes	Yes	Yes
UL50	Type 4/12	Type 4/12	Type 4/12
UL746C, UL94, UL50V, UL1558	Yes	Yes	Yes

General Specification

Maximum Temperature	Gaskets: 250°C (482°F) Body: 659°C (1218°F) Optic: 1400°C (2552°F)
Gaskets	Low smoke and fume (LSF) compliant silicone
NEMA rating	Type 4/12 (UL Third Party Certified)
Vibration rating	IEC60068-2-6
Humidity rating	IEC60068-2-3
Warranty	Lifetime replacement against manufacturing defects

	Window Aperture	Diameter	Depth
IW2000	45mm (1.8in)	77mm (3.0in)	19.5mm (0.8in)
IW3000	73mm (2.9in)	103mm (4.1in)	19.5mm (0.8in)
IW4000	92mm (3.7in)	123mm (4.9in)	21.5mm (0.85in)

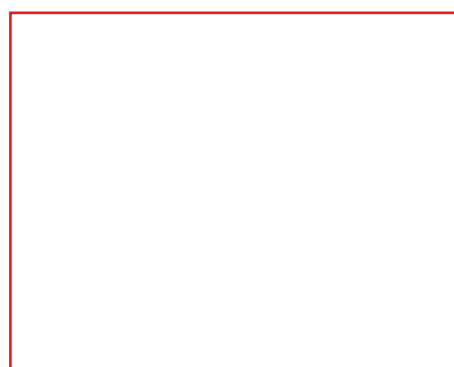
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CRYSTAL

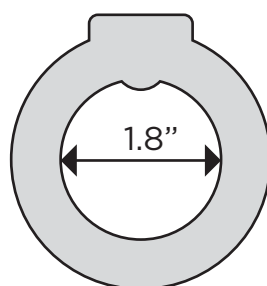


The Crystal window utilizes a crystal lens which is especially designed for high-temperature environments and offers compatibility with all IR imagers for clear thermal and visual inspections.

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Window aperture sizes:
1.8", 2.9", 3.7"

Crystal	IW2000	IW3000	IW4000
Viewing aperture diameter	45mm (1.8in)	73mm (2.9in)	93mm (3.7in)
Viewing aperture area	1591mm ² (2.5in ²)	4186mm ² (5.6in ²)	6794mm ² (9.79in ²)
Thickness	2mm (0.08in)	2mm (0.08in)	4mm (0.16in)
Shortwave IR capable	Yes	Yes	Yes
Midwave IR capable	Yes	Yes	Yes
Longwave IR capable	Yes	Yes	Yes
Ultraviolet (UV) capable	Yes	Yes	Yes
Visual capable	Yes	Yes	Yes
Fusion capable	Yes	Yes	Yes

Certification

Underwriters laboratories (UL) recognised	Yes	Yes	Yes
UL50	Type 4/12	Type 4/12	Type 4/12
UL746C, UL94, UL50V, UL1558	Yes	Yes	Yes
CSA	Yes	Yes	Yes

General Specification

Maximum Temperature	Gaskets: 250°C (482°F) Body: 659°C (1218°F) Optic: 1400°C (2552°F)
Gaskets	Low smoke and fume (LSF) compliant silicone
NEMA rating	Type 4/12 (UL Third Party Certified)
Vibration rating	IEC60068-2-6
Humidity rating	IEC60068-2-3
Warranty	Lifetime replacement against manufacturing defects

	Window Aperture	Diameter	Depth
IW2000	45mm (1.8in)	77mm (3.0in)	19.5mm (0.8in)
IW3000	73mm (2.9in)	103mm (4.1in)	19.5mm (0.8in)
IW4000	92mm (3.7in)	123mm (4.9in)	21.5mm (0.85in)

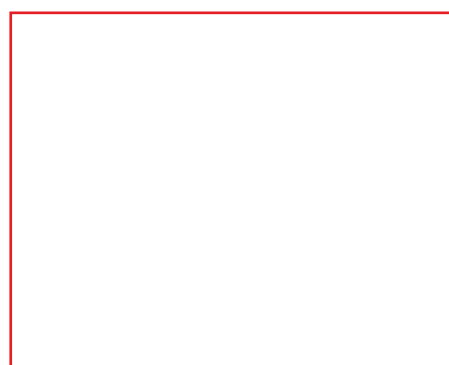
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IR VIEWING PANE



This viewing pane incorporates a unique, patented pressure relief system, BLASTDOWN™, which is critical for arc-flash protection. Should an internal arc event occur, the system diverts the pressure waves downwards (instead of outwards) through dedicated vents in the base of the frame. The cover is designed to automatically close in the event of an arc flash, thus protecting the thermographer, maximizing personnel safety.

The ViPIRS IR Viewing pane uses a single mesh embedded within the polymer itself, creating a robust infrared transmissive optic that complies with the latest codes and standards. With a smooth exterior face of the optic, the ViPIRS IR Viewing pane is simple to clean and maintain ensuring maximum image quality and field of view.

Made with industrial-grade materials, and certified by Underwriters Laboratories (UL) to meet the latest IR window standards, certified IW Series SMART IR Windows align with NFPA70E electrical safety guidelines, minimising the need for bulky PPE.

ViPIRS IR Viewing pane	ViPIRS 4x4	ViPIRS 4x6	ViPIRS 4x8	ViPIRS 4x12	ViPIRS 4x20
IP Rating			IP55		
NEMA Rating (UL250)			Type 4/12		
Operating Temperature			ViPIRS IR Viewing pane		
Body Material			Powder coated aluminium		
Cover Material			Powder coated steel		
Gaskets			Silicone rubber; UL746C, UL94, IEC60695-11-10 compliant		

Dimension & Optic Specifications

Optic Material	UL746C compliant IR transmissive polymer composite with embedded mesh				
UV Stable	Yes				
Anti-fogging	Yes				
Optic Reinforcing Grill Material	Stainless steel				
Viewing Aperture Dimensions	H = 4" (100mm)	H = 4" (100mm)	H = 4" (100mm)	H = 4" (100mm)	H = 4" (100mm)
	x L = 4" (100mm)	x L = 6" (150mm)	x L = 8" (200mm)	x L = 12" (300mm)	x W = 20" (500mm)
Overall Dimensions	H = 6" (150mm)	H = 6" (150mm)	H = 6" (150mm)	H = 6" (150mm)	H = 6" (150mm)
	x W = 7" (179mm)	x W = 9" (229mm)	x W = 11" (280mm)	x W = 15" (380mm)	x W = 23" (585mm)
	x D = 1.6" (41mm)	x D = 1.6" (41mm)	x D = 1.6" (41mm)	x D = 1.6" (41mm)	x D = 1.6" (41mm)

Applications and Compatibility

Low/Medium/High Voltage	Yes
Outdoor Applications	No

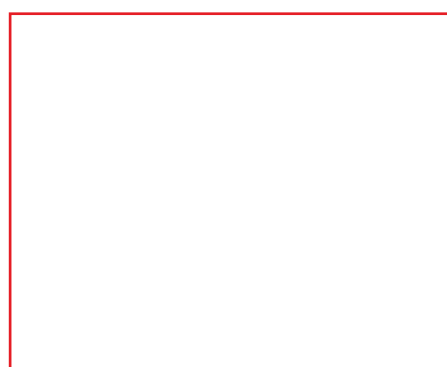
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Company background



It's nice to meet you. Hello and thank you for reading the ViPIRS safety solutions catalogue.

Over 25 years ago when I first embarked on my journey into the world of infrared thermography and electrical safety, an infrared window was a virtually unknown device. Discussions were less focused on features and benefits but more on why performing infrared thermography on live electrical equipment was either unreliable or unsafe.

Safety standards such as NFPA70E have come a long way during this time and training organisations have done a great job educating thermographers as to the dangers of removing panel covers and shooting live equipment, but tragically, there are still to this day reports of severe electrocution and arc-flash related injuries caused by live work.

With the widespread adoption of low cost, high performance infrared cameras and more recently ultrasound inspection devices, the need for safe access to live electrical panels has increased exponentially since the late 90's and it is our hope that the ViPIRS range of safety solutions can help you expand your maintenance coverage whilst reducing the potential risk of injury.

I hope you find this brochure useful and informative. If you have any questions please feel free to either contact our team using the Contact Us details at the end of this document or, alternatively myself, directly at the email address below. I look forward to talking with you.

A handwritten signature in black ink that reads 'Tony Holliday'.

Tony Holliday
Managing Director
Tony.Holliday@cenegex.com