

Vacuum Viewports

Product Introduction

Kinglai offer a range of viewport from HV to UHV.

The viewports are used for process observation in visible spectrum and optical guiding.

For HV viewport, an O-ring is used for sealing.

For UHV, vacuum welding is used for sealing.

In addition, most of the viewports are zero length viewport.

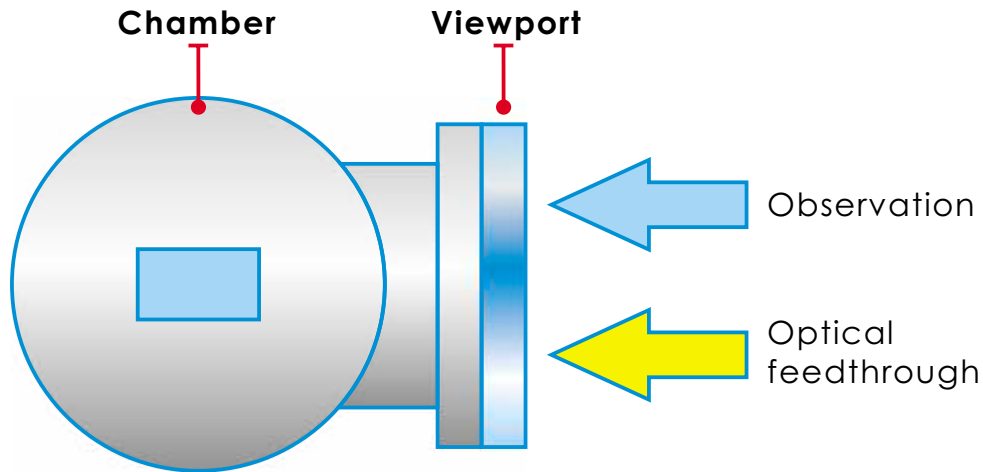
The glass surface do not protrude from the mounting flange.

It gives a better protection from accidental damage, and it provides a good angle of view.

Product Features

- UHV viewports are available for Kodial, fuse silica and sapphire .
- Braze joint design for high temperature operation.
- Customize design are available upon request.

Product Application



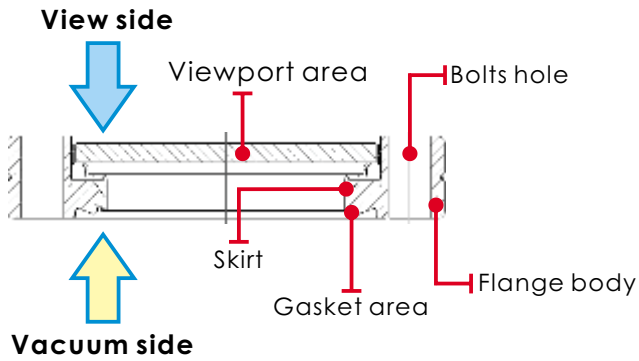
HV View Ports



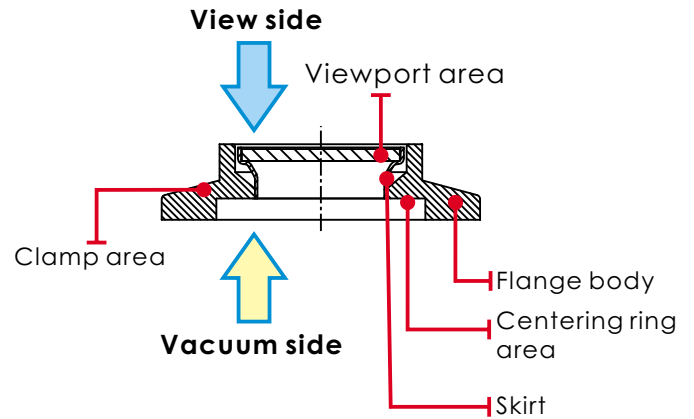
UHV View Ports

Parts of Viewports

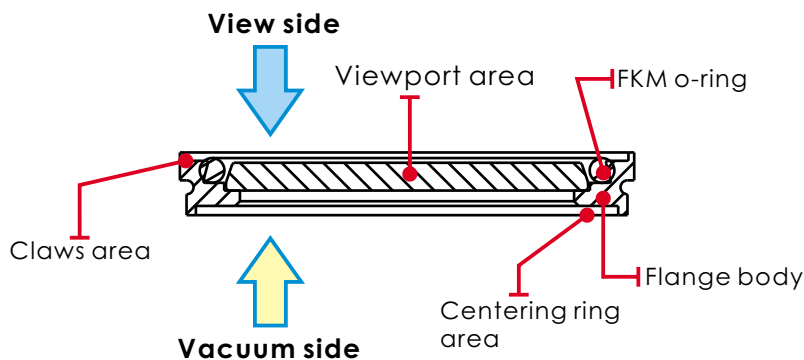
UHV Viewport



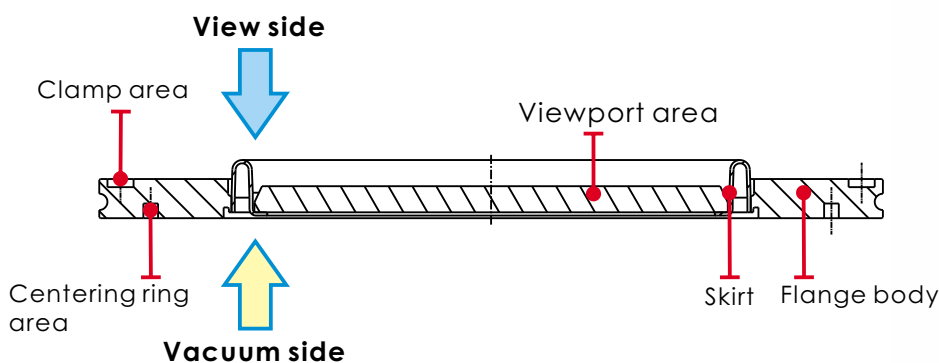
HV KF viewport



HV ISO-K Viewport Type I



HV ISO-K Viewport Type II

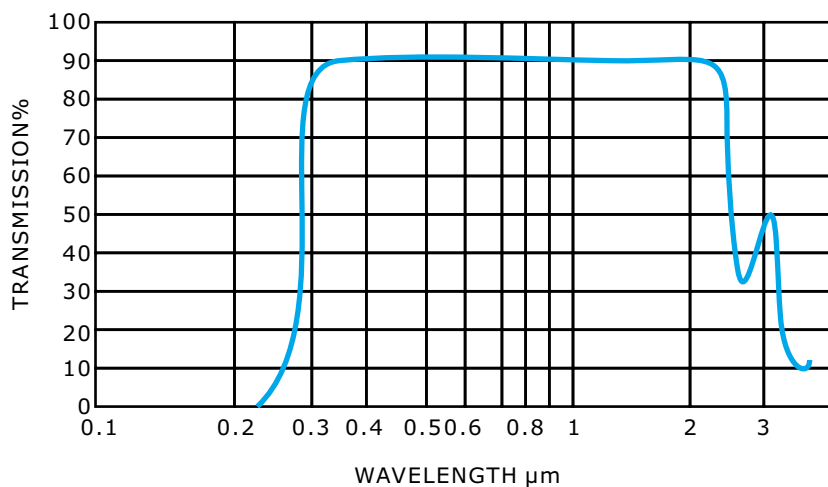


Technical Data

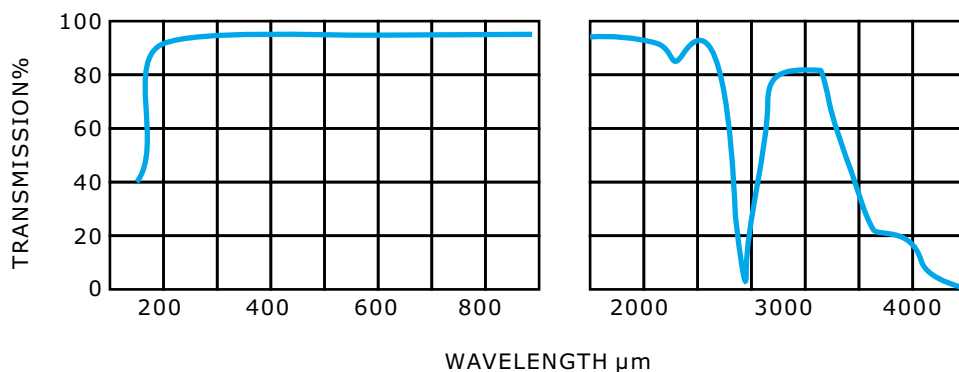
Technical Data for Viewport

	UHV Kodial	UHV Fuse Silica
Viewport seal	Metal skirt	Metal skirt
Mounting seal	OFHC gasket	OFHC gasket
Operate pressure range	760 Torr ~ 1×10^{-10} Torr 1,000 mbar ~ 1.33×10^{-10} mbar 100 kPa ~ 1.13×10^{-9} kPa	760 Torr ~ 1×10^{-10} Torr 1,000 mbar ~ 1.33×10^{-10} mbar 100 kPa ~ 1.13×10^{-9} kPa
Leak rate	1×10^{-10} Torr l/s, He 1.33×10^{-10} mbar l/s, He 1.13×10^{-9} kPa	1×10^{-10} Torr l/s, He 1.33×10^{-10} mbar l/s, He 1.13×10^{-9} kPa
Temperature Range	-20°C(-4°F)~350°C(662°F)	-20°C(-4°F)~200°C(392°F)
Bake Temperature	300°C (572°F)	150°C (302°F)
Maximum temperature change per minute	3°C (37°F)	3°C (37°F)
Body material	SUS304/L	SUS304/L
Viewport material	Kodial	Fuse Silica
Mounting position	Any	Any

Transmission Curve Kodial

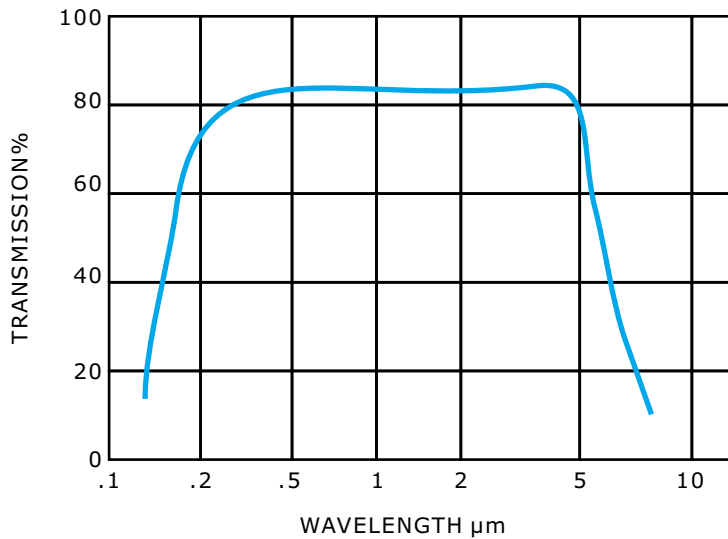


Transmission Curve Fuse Silica



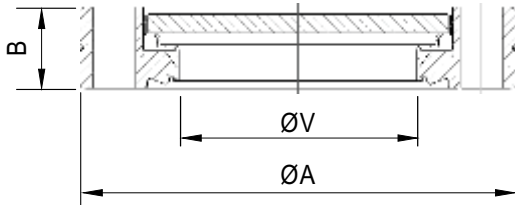
UHV Sapphire	HV Kodial	HV Tempered Glass
Metal skirt	Metal skirt	FKM o-ring
OFHC gasket	Cnetering ring	Cnetering ring
760 Torr $\sim 1 \times 10^{-10}$ Torr 1,000 mbar $\sim 1.33 \times 10^{-10}$ mbar 100 kPa $\sim 1.13 \times 10^{-9}$ kPa	760 Torr $\sim 1 \times 10^{-8}$ Torr 1,000 mbar $\sim 1.33 \times 10^{-8}$ mbar 100 kPa $\sim 1.13 \times 10^{-7}$ kPa	760 Torr $\sim 1 \times 10^{-8}$ Torr 1,000 mbar $\sim 1.33 \times 10^{-8}$ mbar 100 kPa $\sim 1.13 \times 10^{-7}$ kPa
1×10^{-10} Torr l/s, He 1.33×10^{-10} mbar l/s, He 1.13×10^{-9} kPa	1×10^{-9} Torr l/s, He 1.33×10^{-9} mbar l/s, He 1.13×10^{-9} kPa	1×10^{-9} Torr l/s, He 1.33×10^{-9} mbar l/s, He 1.13×10^{-9} kPa
-20°C(-4°F) \sim 200°C(392°F)	-20°C(-4°F) \sim 200°C(392°F)	0°C(32°F) \sim 200°C(392°F)
150°C (302°F)	150°C (302°F)	150°C (302°F)
3°C (37°F)	3°C (37°F)	3°C (37°F)
SUS304/L	SUS304/L	SUS304/L
Sapphire	Kodial	Tempered Glass
Any	Any	Any

Transmission Curve Sapphire



Product Order Information

◆ Figure 1-UHV Viewport



UHV Kodial Viewport, CF Flanges, SUS304/L

Catalogue PN	Size	Figure	A	B	V
VP-KD-CF-133	CF1.33"	1	34	8	16
VP-KD-CF-275	CF2.75"	1	69	13	38
VP-KD-CF-450	CF4.5"	1	114	17	64
VP-KD-CF-600	CF6"	1	152	20	89
VP-KD-CF-800	CF8"	1	202	22	137

UHV Kodial Viewport, CF Flanges, SUS316LN

Catalogue PN	Size	Figure	A	B	V
VP-KD-CF-133-6LN	CF1.33"	1	34	8	16
VP-KD-CF-275-6LN	CF2.75"	1	69	13	38
VP-KD-CF-450-6LN	CF4.5"	1	114	17	64
VP-KD-CF-600-6LN	CF6"	1	152	20	89
VP-KD-CF-800-6LN	CF8"	1	202	22	137

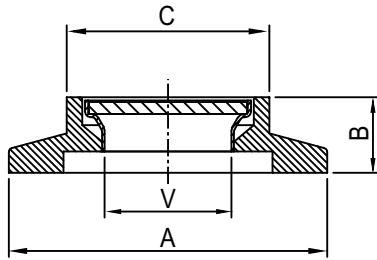
UHV Fuse Silica Viewport, CF Flanges, SUS304/L

Catalogue PN	Size	Figure	A	B	V
VP-QZ-CF-133	CF1.33"	1	34	13	15
VP-QZ-CF-275	CF2.75"	1	69	13	32
VP-QZ-CF-450	CF4.5"	1	114	17	63
VP-QZ-CF-600	CF6"	1	152	20	89
VP-QZ-CF-800	CF8"	1	202	22	136

UHV Sapphire Viewport, CF Flanges, SUS304/L

Catalogue PN	Size	Figure	A	B	V
VP-SH-CF-133	CF1.33"	1	34	13	15
VP-SH-CF-275	CF2.75"	1	69	13	32
VP-SH-CF-450	CF4.5"	1	114	17	63
VP-SH-CF-600	CF6"	1	152	20	89
VP-SH-CF-800	CF8"	1	202	22	136

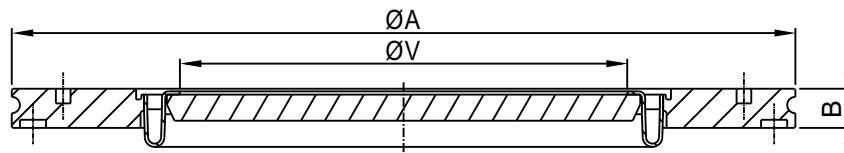
◆ **Figure 2- HV KF Viewport**



HV Kodial Viewport, KF Flanges, SUS304/L

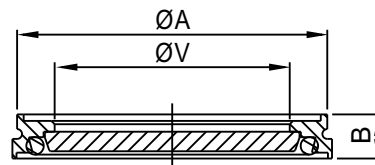
Catalogue PN	Size	Figure	A	B	C	V
VP-KD-KF-25	KF25	2	40	9	25	16
VP-KD-KF-50	KF50	2	75	14	52	38

◆ **Figure 3- HV ISO-K Viewport Type II**



Catalogue PN	Size	Figure	A	B	V
VP-KD-ISOF-63	ISO-K 63	3	95	14	64
VP-KD-ISOF-100	ISO-K 100	3	130	16	89
VP-KD-ISOF-160	ISO-K 160	3	180	17	137
VP-KD-ISOF-200	ISO-K 200	3	240	18	137
VP-KD-ISOF-250	ISO-K 250	3	290	19	137

◆ **Figure 4- HV ISO-K Viewport Type I**



Catalogue PN	Size	Figure	A	B	V
VP-TC-ISOF-63	ISO-K 63	4	95	14	64
VP-TC-ISOF-100	ISO-K 100	4	130	16	89
VP-TC-ISOF-160	ISO-K 160	4	180	17	137
VP-TC-ISOF-200	ISO-K 200	4	240	18	137
VP-TC-ISOF-250	ISO-K 250	4	290	19	137