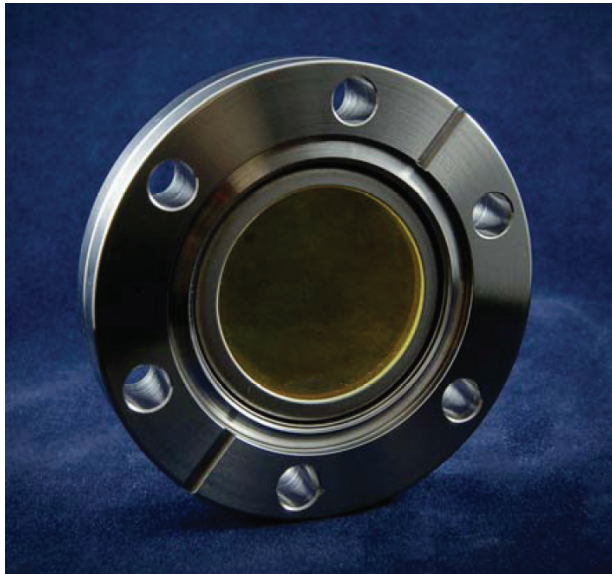


AR Coated Zinc Selenide Zero Length Viewports

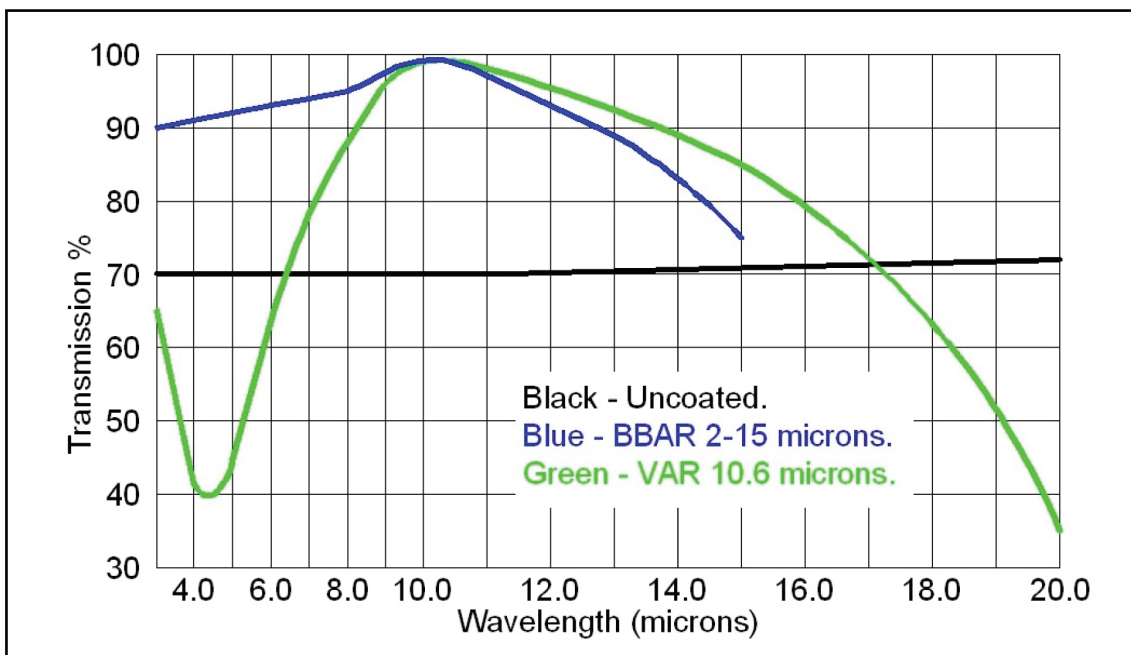


Specification	
Seal Type	Bond
Maximum Temperature	120°C
Minimum Temperature	minus 20°C
Maximum Rate of Temperature Change	3°C per minute
Leak Rate	<1x10 ⁻¹⁰ atm-cc/sec (He)
Pressure Range	1 bar to 1x10 ⁻¹¹ mbar
Surface Quality	60 /40 scratch/dig
Flatness	<2λ

Torr Scientific zinc selenide viewports with anti-reflective (AR) coatings are offered in CF, ISO and KF flange styles. The viewports comprise an AR coated laser quality zinc selenide optic with precise flatness, parallelism, scratch and dig specifications. The viewport optic is coated on both sides as standard and coatings are processed to minimise reflectance at 10.6 microns. The transmission graph below shows typical before and after transmission effect of the 'BBAR' and 'VAR' anti-reflective coatings offered as standard on Zinc Selenide Viewports. The ultra high vacuum (UHV) CF versions are offered using high grade 304L or 316LN stainless steel flanges. Non-magnetic viewports are offered for low energy applications or surface science applications needing low magnetic fields. The non-magnetic viewports use a tantalum weld ring instead of the regular kovar weld ring. Flanges in 316L stainless steel are used for the high vacuum KF and ISO viewports. TSL viewports are manufactured in cleanroom conditions and helium leak tested, cleaned and packed to UHV standards. The rugged construction of the zinc selenide viewports allows bake-out to a maximum of 120°C with UHV performance, whilst the window offers broadband optical transmission to extreme infra-red. Options with anti-reflective coatings are also offered. Non-standard viewports can be manufactured on request, including re-entrant style microscope/camera viewports. Annealed copper gaskets and other component accessories are also supplied by TSL.

AR Coated Zinc Selenide Zero Length Viewports

Transmission Curve - Zinc Selenide

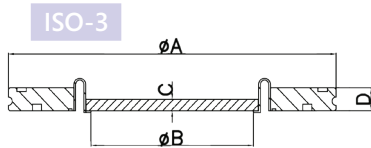
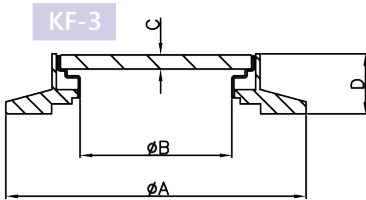
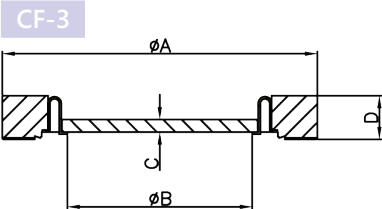
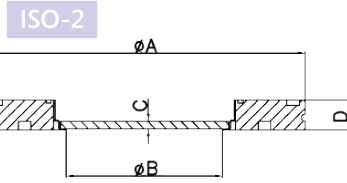
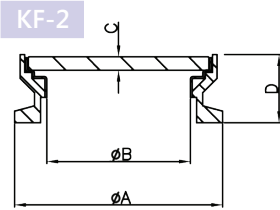
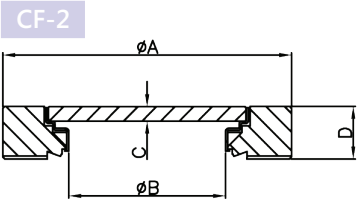
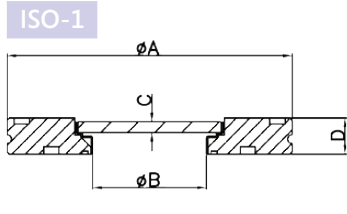
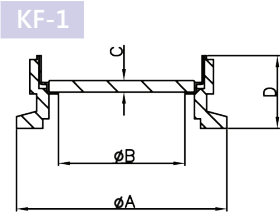
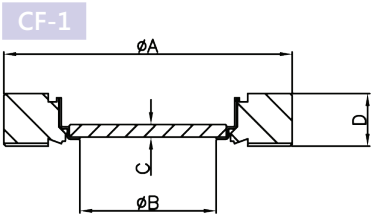


Please note that the optical transmission curves are approximations and should be used for reference only



AR Coated Zinc Selenide Zero Length Viewports

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Part Number	Flange Type	A	B	C	D	Dia-gram	Flange Material	Weld Ring Material	Non-Magnetic	Coating
BVPZ16ZnSe-10600	NW16CF	34	15	1.5	12.7	CF-1	304L	Kovar		VAR 10.6μ
BVPZ16ZnSe-2-15	NW16CF	34	15	1.5	12.7	CF-1	304L	Kovar		BBAR 2-15μ
BVPZ16ZnSe-LN-10600	NW16CF	34	15	1.5	12.7	CF-1	316LN	Kovar		VAR 10.6μ
BVPZ16ZnSe-LN-2-15	NW16CF	34	15	1.5	12.7	CF-1	316LN	Kovar		BBAR 2-15μ
BVPZ16ZnSe-NM-10600	NW16CF	34	15	1.5	12.7	CF-1	316LN	Tantalum	Yes	VAR 10.6μ
BVPZ16ZnSe-NM-2-15	NW16CF	34	15	1.5	12.7	CF-1	316LN	Tantalum	Yes	BBAR 2-15μ
BKVPZ16ZnSe-10600	KF16	25	15	1.5	12.7	KF-1	304L	Kovar		VAR 10.6μ
BKVPZ16ZnSe-2-15	KF16	25	15	1.5	12.7	KF-1	304L	Kovar		BBAR 2-15μ
BKVPZ25ZnSe-10600	KF25	40	20	2	18.5	KF-1	304L	Kovar		VAR 10.6μ
BKVPZ25ZnSe-2-15	KF25	40	20	2	18.5	KF-1	304L	Kovar		BBAR 2-15μ
BVPZ38ZnSe-10600	NW35CF	70	32	3	12.7	CF-1	304L	Kovar		VAR 10.6μ
BVPZ38ZnSe-2-15	NW35CF	70	32	3	12.7	CF-1	304L	Kovar		BBAR 2-15μ
BVPZ38LAZnSe-10600	NW35CF	70	38	3.75	12.7	CF-2	304L	Kovar		VAR 10.6μ
BVPZ38LAZnSe-2-15	NW35CF	70	38	3.75	12.7	CF-2	304L	Kovar		BBAR 2-15μ
BVPZ38ZnSe-LN-10600	NW35CF	70	32	3	12.7	CF-1	316LN	Kovar		VAR 10.6μ
BVPZ38ZnSe-LN-2-15	NW35CF	70	32	3	12.7	CF-1	316LN	Kovar		BBAR 2-15μ
BVPZ38LAZnSe-LN-10600	NW35CF	70	38	3.75	12.7	CF-2	316LN	Kovar		VAR 10.6μ
BVPZ38LAZnSe-LN-2-15	NW35CF	70	38	3.75	12.7	CF-2	316LN	Kovar		BBAR 2-15μ
BVPZ38ZnSe-NM-10600	NW35CF	70	32	3	12.7	CF-1	316LN	Tantalum	Yes	VAR 10.6μ
BVPZ38ZnSe-NM-2-15	NW35CF	70	32	3	12.7	CF-1	316LN	Tantalum	Yes	BBAR 2-15μ
BKVPZ40/32ZnSe-10600	KF40	55	32	3	12.7	KF-1	304L	Kovar		VAR 10.6μ
BKVPZ40/32ZnSe-2-15	KF40	55	32	3	12.7	KF-1	304L	Kovar		BBAR 2-15μ
BKVPZ40ZnSe-10600	KF40	55	38	3.75	18.5	KF-2	304L	Kovar		VAR 10.6μ
BKVPZ40ZnSe-2-15	KF40	55	38	3.75	18.5	KF-2	304L	Kovar		BBAR 2-15μ
BKVPZ50ZnSe-10600	KF50	75	38	3.75	15	KF-3	304L	Kovar		VAR 10.6μ
BKVPZ50ZnSe-2-15	KF50	75	38	3.75	15	KF-3	304L	Kovar		BBAR 2-15μ
BVPZ64ZnSe-10600	NW63CF	114	63	5	17.4	CF-1	304L	Kovar		VAR 10.6μ
BVPZ64ZnSe-2-15	NW63CF	114	63	5	17.4	CF-1	304L	Kovar		BBAR 2-15μ
BVPZ64ZnSe-LN-10600	NW63CF	114	63	5	17.4	CF-1	316LN	Kovar		VAR 10.6μ
BVPZ64ZnSe-LN-2-15	NW63CF	114	63	5	17.4	CF-1	316LN	Kovar		BBAR 2-15μ
BVPZ64ZnSe-NM-10600	NW63CF	114	63	5	17.4	CF-1	316LN	Tantalum	Yes	VAR 10.6μ
BVPZ64ZnSe-NM-2-15	NW63CF	114	63	5	17.4	CF-1	316LN	Tantalum	Yes	BBAR 2-15μ
BISO63VPZZnSe-10600	ISO63	95	38	3.75	12	ISO-1	304L	Kovar		VAR 10.6μ
BISO63VPZZnSe-2-15	ISO63	95	38	3.75	12	ISO-1	304L	Kovar		BBAR 2-15μ
BVPZ100ZnSe-2-15	NW100CF	152	89	6.5	19.9	CF-3	304L	Kovar		BBAR 2-15μ
BVPZ100ZnSe-LN-2-15	NW100CF	152	89	6.5	19.9	CF-3	316LN	Kovar		BBAR 2-15μ
BVPZ100ZnSe-NM-2-15	NW100CF	152	89	6.5	19.9	CF-3	316LN	Tantalum	Yes	BBAR 2-15μ
BISO100VPZZnSe-10600	ISO100	130	63	5	12	ISO-2	304L	Kovar		VAR 10.6μ
BISO100VPZZnSe-2-15	ISO100	130	63	5	12	ISO-2	304L	Kovar		BBAR 2-15μ
BVPZ150ZnSe-2-15	NW150CF	203	136	9.5	22.3	CF-3	304L	Kovar		BBAR 2-15μ
BVPZ150ZnSe-LN-2-15	NW150CF	203	136	9.5	22.3	CF-3	316LN	Kovar		BBAR 2-15μ
BVPZ150ZnSe-NM-2-15	NW150CF	203	136	9.5	22.3	CF-3	316LN	Tantalum	Yes	BBAR 2-15μ
BISO160VPZZnSe-2-15	ISO160	180	89	6.5	12	ISO-3	304L	Kovar		BBAR 2-15μ
BVPZ200ZnSe-2-15	NW200CF	254	136	9.5	24.5	CF-3	304L	Kovar		BBAR 2-15μ

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