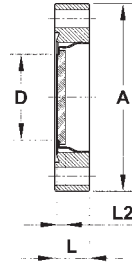


Boron Crown Glass, BK7® Optically Polished, Unexchangeable Window



3

Technical data

- Specifications
- Connection
- Leak rate
- Window material
- Transmission range
- Temperature range
- Surface quality
- Flatness
- Magnetic type
 - flange material
- Non-magnetic type
 - flange material
- Coating
 - narrow band (1QWOT or "V" coating)
 - broadband

CF viewport with firmly connected BK7® window
 CF flange
 $< 1.0E-10$ mbar l/s
 boron crown glass, BK7® optically polished
 0.4 - 2.0 μm
 to 130 °C
 20/10 (scratch/dig)
 $< 4 \lambda$ (better surface quality and flatness on request)

stainless steel - 304L (1.4307)

stainless steel - 316LN (1.4429)
 detailed information see introduction
 possible coating range 194 - 1200 nm

Please add the required wavelength or wavelength range to the order code

Standard

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16BK7-GS	VPZ16BK7-GS-NM	DN16CF	34	16	12.7	3
VPZ40BK7-GS	VPZ40BK7-GS-NM	DN40CF	70	32	12.7	6
VPZ40LABK7-GS	-	DN40CF	70	38	12.7	6
VPZ64BK7-GS	VPZ64BK7-GS-NM	DN63CF	114	63	17.4	6
VPZ100BK7-GS	VPZ100BK7-GS-NM	DN100CF	152	89	19.9	8
VPZ160BK7-GS	VPZ160BK7-GS-NM	DN160CF	203	136	22.3	8

Viewports with Defined Optical Quality

Boron Crown Glass, BK7® Optically Polished, Unexchangeable Window

With antireflection coating, 1QWOT

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16BK7-GS-AR	VPZ16BK7-GS-NM-AR	DN16CF	34	16	12.7	3
VPZ40BK7-GS-AR	VPZ40BK7-GS-NM-AR	DN40CF	70	32	12.7	3
VPZ40LABK7-GS-AR	-	DN40CF	70	38	12.7	3
VPZ64BK7-GS-AR	VPZ64BK7-GS-NM-AR	DN63CF	114	63	17.4	3
VPZ100BK7-GS-AR	VPZ100BK7-GS-NM-AR	DN100CF	152	89	19.9	4
VPZ160BK7-GS-AR	VPZ160BK7-GS-NM-AR	DN160CF	203	136	22.3	4

With antireflection coating, "V" coating

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16BK7-GS-VAR	VPZ16BK7-GS-NM-VAR	DN16CF	34	16	12.7	3
VPZ40BK7-GS-VAR	VPZ40BK7-GS-NM-VAR	DN40CF	70	32	12.7	3
VPZ40LABK7-GS-VAR	-	DN40CF	70	38	12.7	3
VPZ64BK7-GS-VAR	VPZ64BK7-GS-NM-VAR	DN63CF	114	63	17.4	3
VPZ100BK7-GS-VAR	VPZ100BK7-GS-NM-VAR	DN100CF	152	89	19.9	4
VPZ160BK7-GS-VAR	VPZ160BK7-GS-NM-VAR	DN160CF	203	136	22.3	4

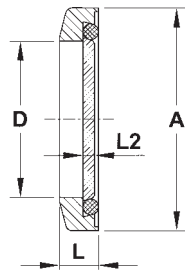
With antireflection coating, broadband

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16BK7-GS-BBAR	VPZ16BK7-GS-NM-BBAR	DN16CF	34	16	12.7	3
VPZ40BK7-GS-BBAR	VPZ40BK7-GS-NM-BBAR	DN40CF	70	32	12.7	3
VPZ40LABK7-GS-BBAR	-	DN40CF	70	38	12.7	3
VPZ64BK7-GS-BBAR	VPZ64BK7-GS-NM-BBAR	DN63CF	114	63	17.4	3
VPZ100BK7-GS-BBAR	VPZ100BK7-GS-NM-BBAR	DN100CF	152	89	19.9	4
VPZ160BK7-GS-BBAR	VPZ160BK7-GS-NM-BBAR	DN160CF	203	136	22.3	4

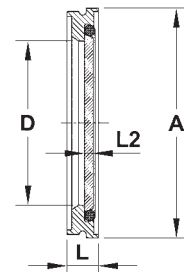
Quartz, Exchangeable Window



KF flange



ISO flange



Technical data

■ Specifications

■ Connection

■ Leak rate

■ Window material

■ Flatness

■ Flange material (magnetic)

■ Seal

■ Transmission range

■ Temperature range

KF and ISO-K viewport with exchangeable quartz window

- flat construction

- easy assembly and disassembly

KF and ISO-K flange

< 1.0E-8 mbar l/s

quartz

< 4 λ

stainless steel - 304L (1.4307)

FKM O-ring

0.3 - 4.0 μm

to 150 °C bakeable

Standard

Order code	Flange	A	D	L	L2
KVPZ40QTCRSV	DN40KF	57	40	10.0	3.8
KVPZ50QTCRSV	DN50KF	77	50	10.0	3.8
ISOVPZ63QTCRSV	DN63ISO	98	70	13.5	3.8
ISOVPZ100QTCRSV	DN100ISO	133	102	13.0	5
ISOVPZ160QTCRSV	DN160ISO	183	153	17.0	6

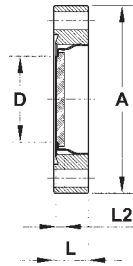
Accessories, replacement windows

Order code	Flange	Accessories for
KF40VPQUARZ	DN40KF	KVPZ40QTCRSV
KF50VPQUARZ	DN50KF	KVPZ50QTCRSV
ISO63VPQUARZ	DN63ISO	ISOVPZ63QTCRSV
ISO100VPQUARZ	DN100ISO	ISOVPZ100QTCRSV
ISO160VPQUARZ	DN160ISO	ISOVPZ160QTCRSV

Accessories, replacement O-rings

Order code	Flange
KF40VR	DN40KF
KF50VR	DN50KF
ISO63VR-VP	DN63ISO
ISO100VR-VP	DN100ISO
ISO160VR-VP	DN160ISO

Quartz, Fused Silica Spectrosil 2000®, Unexchangeable Window



3

Technical data

■ Specifications

■ Connection

■ Leak rate

■ Window material

■ Transmission range

■ Temperature range

■ Surface quality

■ Flatness

■ Magnetic type

- flange material
- glass-to-metal connection

■ Non-magnetic type

- flange material
- glass-to-metal connection

■ Coating

- narrow band (1QWOT or "V" coating)
- broadband

CF viewport with firmly connected quartz (fused silica Spectrosil 2000®) window

CF flange

< 1.0E-10 mbar l/s

fused silica Spectrosil 2000®

0.19 - 2.0 µm

to 200 °C

20/10 (scratch/dig)

< 8 λ (better surface quality and flatness on request)

stainless steel - 304L (1.4307)

Kovar®

stainless steel - 316LN (1.4429)

tantalum

detailed information see introduction

possible coating range 194 - 1200 nm

Please add the required wavelength or wavelength range to the order code

Standard

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16QS-MB	VPZ16QS-MB-NM	DN16CF	34	16	12.7	1.5
VPZ40QS-MB	VPZ40QS-MB-NM	DN40CF	70	32	12.7	3
VPZ40LAQS-MB	-	DN40CF	70	38	12.7	3,5
VPZ64QS-MB	VPZ64QS-MB-NM	DN63CF	114	63	17.4	4.5
VPZ100QS-MB	VPZ100QS-MB-NM	DN100CF	152	89	19.9	6
VPZ160QS-MB	VPZ160QS-MB-NM	DN160CF	203	136	22.3	9.5

Viewports with Defined Optical Quality

Quartz, Fused Silica Spectrosil 2000®, Unexchangeable Window

With antireflection coating, 1QWOT

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16QS-MB-AR	VPZ16QS-MB-NM-AR	DN16CF	34	16	12.7	1.5
VPZ40QS-MB-AR	VPZ40QS-MB-NM-AR	DN40CF	70	32	12.7	3
VPZ40LAQS-MB-AR	-	DN40CF	70	38	12.7	3.5
VPZ64QS-MB-AR	VPZ64QS-MB-NM-AR	DN63CF	114	63	17.4	4.5
VPZ100QS-MB-AR	VPZ100QS-MB-NM-AR	DN100CF	152	89	19.9	6
VPZ160QS-MB-AR	VPZ160QS-MB-NM-AR	DN160CF	203	136	22.3	9.5

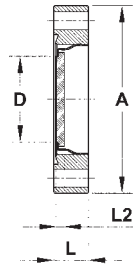
With antireflection coating, "V" coating

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16QS-MB-VAR	VPZ16QS-MB-NM-VAR	DN16CF	34	16	12.7	1.5
VPZ40QS-MB-VAR	VPZ40QS-MB-NM-VAR	DN40CF	70	32	12.7	3
VPZ40LAQS-MB-VAR	-	DN40CF	70	38	12.7	3.5
VPZ64QS-MB-VAR	VPZ64QS-MB-NM-VAR	DN63CF	114	63	17.4	4.5
VPZ100QS-MB-VAR	VPZ100QS-MB-NM-VAR	DN100CF	152	89	19.9	6
VPZ160QS-MB-VAR	VPZ160QS-MB-NM-VAR	DN160CF	203	136	22.3	9.5

With antireflection coating, broadband

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16QS-MB-BBAR	VPZ16QS-MB-NM-BBAR	DN16CF	34	16	12.7	1.5
VPZ40QS-MB-BBAR	VPZ40QS-MB-NM-BBAR	DN40CF	70	32	12.7	3
VPZ40LAQS-MB-BBAR	-	DN40CF	70	38	12.7	3.5
VPZ64QS-MB-BBAR	VPZ64QS-MB-NM-BBAR	DN63CF	114	63	17.4	4.5
VPZ100QS-MB-BBAR	VPZ100QS-MB-NM-BBAR	DN100CF	152	89	19.9	6
VPZ160QS-MB-BBAR	VPZ160QS-MB-NM-BBAR	DN160CF	203	136	22.3	9.5

Quartz, Z-cut, Unexchangeable Window



3

Technical data

- Specifications
- Connection
- Leak rate
- Window material
- Transmission range
- Temperature range
- Surface quality
- Flatness
- Magnetic type
 - flange material
 - glass-to-metal connection
- Non-magnetic type
 - flange material
 - glass-to-metal connection
- Coating
 - narrow band (1QWOT or "V" coating)
 - broadband

CF viewport with firmly connected quartz (Z-cut) window

CF flange

< 1.0E-10 mbar l/s

quartz (Z-cut)

0.3 - 4.0 μm

to 200 °C

20/10 (scratch/dig)

< 8 λ (better surface quality and flatness on request)

stainless steel - 304L (1.4307)

Kovar®

stainless steel - 316LN (1.4429)

tantalum

detailed information see introduction

possible coating range 194 - 1200 nm

Please add the required wavelength or wavelength range to the order code

Standard

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16QZCUT-MB	VPZ16QZCUT-MB-NM	DN16CF	34	16	12.7	1.5
VPZ40QZCUT-MB	VPZ40QZCUT-MB-NM	DN40CF	70	32	12.7	3
VPZ40LAQZCUT-MB	-	DN40CF	70	38	12.7	3.5
VPZ64QZCUT-MB	VPZ64QZCUT-MB-NM	DN63CF	114	63	17.4	4.5
VPZ100QZCUT-MB	VPZ100QZCUT-MB-NM	DN100CF	152	89	19.9	6
VPZ160QZCUT-MB	VPZ160QZCUT-MB-NM	DN160CF	203	136	22.3	9.5

Viewports with Defined Optical Quality

Quartz, Z-cut, Unexchangeable Window

With antireflection coating, 1QWOT

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16QZCUT-MB-AR	VPZ16QZCUT-MB-NM-AR	DN16CF	34	16	12.7	1.5
VPZ40QZCUT-MB-AR	VPZ40QZCUT-MB-NM-AR	DN40CF	70	32	12.7	3
VPZ40LAQZCUT-MB-AR	-	DN40CF	70	38	12.7	3.5
VPZ64QZCUT-MB-AR	VPZ64QZCUT-MB-NM-AR	DN63CF	114	63	17.4	4.5
VPZ100QZCUT-MB-AR	VPZ100QZCUT-MB-NM-AR	DN100CF	152	89	19.9	6
VPZ160QZCUT-MB-AR	VPZ160QZCUT-MB-NM-AR	DN160CF	203	136	22.3	9.5

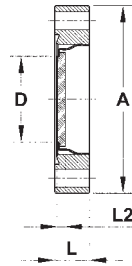
With antireflection coating, "V" coating

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16QZCUT-MB-VAR	VPZ16QZCUT-MB-NM-VAR	DN16CF	34	16	12.7	1.5
VPZ40QZCUT-MB-VAR	VPZ40QZCUT-MB-NM-VAR	DN40CF	70	32	12.7	3
VPZ40LAQZCUT-MB-VAR	-	DN40CF	70	38	12.7	3.5
VPZ64QZCUT-MB-VAR	VPZ64QZCUT-MB-NM-VAR	DN63CF	114	63	17.4	4.5
VPZ100QZCUT-MB-VAR	VPZ100QZCUT-MB-NM-VAR	DN100CF	152	89	19.9	6
VPZ160QZCUT-MB-VAR	VPZ160QZCUT-MB-NM-VAR	DN160CF	203	136	22.3	9.5

With antireflection coating, broadband

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16QZCUT-MB-BBAR	VPZ16QZCUT-MB-NM-BBAR	DN16CF	34	16	12.7	1.5
VPZ40QZCUT-MB-BBAR	VPZ40QZCUT-MB-NM-BBAR	DN40CF	70	32	12.7	3
VPZ40LAQZCUT-MB-BBAR	-	DN40CF	70	38	12.7	3.5
VPZ64QZCUT-MB-BBAR	VPZ64QZCUT-MB-NM-BBAR	DN63CF	114	63	17.4	4.5
VPZ100QZCUT-MB-BBAR	VPZ100QZCUT-MB-NM-BBAR	DN100CF	152	89	19.9	6
VPZ160QZCUT-MB-BBAR	VPZ160QZCUT-MB-NM-BBAR	DN160CF	203	136	22.3	9.5

Magnesium Fluoride Optically Polished, Unexchangeable Window



3

Technical data

- Specifications
- Connection
- Leak rate
- Window material
- Transmission range
- Temperature range
- Surface quality
- Flatness
- Magnetic type
 - flange material
- Non-magnetic type
 - flange material
- Coating
 - narrow band (1QWOT or "V" coating)
 - broadband

CF viewport with firmly connected magnesium fluoride window

CF flange

< 1.0E-10 mbar l/s

magnesium fluoride

0.12 - 7.0 μm

to 120 °C

60/40 (scratch/dig)

< 4 λ (better surface quality and flatness on request)

stainless steel - 304L (1.4307)

stainless steel - 316LN (1.4429)

detailed information see introduction

possible coating range 194 - 1200 nm

Please add the required wavelength or wavelength range to the order code

Standard

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16MGF2-BO	VPZ16MGF2-BO-NM	DN16CF	34	16	12.7	1.5
VPZ40MGF2-BO	VPZ40MGF2-BO-NM	DN40CF	70	32	12.7	3
VPZ40LAMGF2-BO	-	DN40CF	70	38	12.7	4
VPZ64MGF2-BO	VPZ64MGF2-BO-NM	DN63CF	114	63	17.4	5
VPZ100MGF2-BO	VPZ100MGF2-BO-NM	DN100CF	152	89	19.9	6.5
VPZ160MGF2-BO	VPZ160MGF2-BO-NM	DN160CF	203	136	22.3	9.5

Viewports with Defined Optical Quality

Magnesium Fluoride Optically Polished, Unexchangeable Window

With antireflection coating, 1QWOT

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16MGF2-BO-AR	VPZ16MGF2-BO-NM-AR	DN16CF	34	16	12.7	1.5
VPZ40MGF2-BO-AR	VPZ40MGF2-BO-NM-AR	DN40CF	70	32	12.7	3
VPZ40LAMGF2-BO-AR	-	DN40CF	70	38	12.7	4
VPZ64MGF2-BO-AR	VPZ64MGF2-BO-NM-AR	DN63CF	114	63	17.5	5
VPZ100MGF2-BO-AR	VPZ100MGF2-BO-NM-AR	DN100CF	152	89	19.9	6.5
VPZ160MGF2-BO-AR	VPZ160MGF2-BO-NM-AR	DN160CF	203	136	22.3	9.5

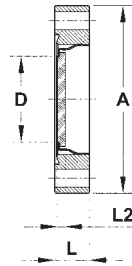
With antireflection coating, "V" coating

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16MGF2-BO-VAR	VPZ16MGF2-BO-NM-VAR	DN16CF	34	16	12.7	1.5
VPZ40MGF2-BO-VAR	VPZ40MGF2-BO-NM-VAR	DN40CF	70	32	12.7	3
VPZ40LAMGF2-BO-VAR	-	DN40CF	70	38	12.7	4
VPZ64MGF2-BO-VAR	VPZ64MGF2-BO-NM-VAR	DN63CF	114	63	17.4	5
VPZ100MGF2-BO-VAR	VPZ100MGF2-BO-NM-VAR	DN100CF	152	89	19.9	6.5
VPZ160MGF2-BO-VAR	VPZ160MGF2-BO-NM-VAR	DN160CF	203	136	22.3	9.5

With antireflection coating, broadband

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16MGF2-BO-BBAR	VPZ16MGF2-BO-NM-BBAR	DN16CF	34	16	12.7	1.5
VPZ40MGF2-BO-BBAR	VPZ40MGF2-BO-NM-BBAR	DN40CF	70	32	12.7	3
VPZ40LAMGF2-BO-BBAR	-	DN40CF	70	38	12.7	4
VPZ64MGF2-BO-BBAR	VPZ64MGF2-BO-NM-BBAR	DN63CF	114	63	17.4	5
VPZ100MGF2-BO-BBAR	VPZ100MGF2-BO-NM-BBAR	DN100CF	152	89	19.9	6.5
VPZ160MGF2-BO-BBAR	VPZ160MGF2-BO-NM-BBAR	DN160CF	203	136	22.3	9.5

Calcium Fluoride Optically Polished, Unexchangeable Window



3

Technical data

■ Specifications

■ Connection

■ Leak rate

■ Window material

■ Transmission range

■ Temperature range

■ Surface quality

■ Flatness

■ Magnetic type

- flange material

■ Non-magnetic type

- flange material

■ Coating

- narrow band (1QWOT or "V" coating)
- broadband

CF viewport with firmly connected calcium fluoride window

CF flange

< 1.0E-10 mbar l/s

calcium fluoride

0.13 - 10.0 μ m

to 120 °C

80/50 (scratch/dig)

< 4 λ (better surface quality and flatness on request)

stainless steel - 304L (1.4307)

stainless steel - 316LN (1.4429)

detailed information see introduction

possible coating range 194 - 1200 nm

Please add the required wavelength

or wavelength range

to the order code

Standard

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16CAF2-BO	VPZ16CAF2-BO-NM	DN16CF	34	16	12.7	1.5
VPZ40CAF2-BO	VPZ40CAF2-BO-NM	DN40CF	70	32	12.7	3
VPZ40LACAF2-BO	-	DN40CF	70	38	12.7	4
VPZ64CAF2-BO	VPZ64CAF2-BO-NM	DN63CF	114	63	17.4	5
VPZ100CAF2-BO	VPZ100CAF2-BO-NM	DN100CF	152	89	19.9	7
VPZ160CAF2-BO	VPZ160CAF2-BO-NM	DN160CF	203	136	22.3	11

Viewports with Defined Optical Quality

Calcium Fluoride Optically Polished, Unexchangeable Window

With antireflection coating, 1QWOT

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16CAF2-BO-AR	VPZ16CAF2-BO-NM-AR	DN16CF	34	16	12.7	1.5
VPZ40CAF2-BO-AR	VPZ40CAF2-BO-NM-AR	DN40CF	70	32	12.7	3
VPZ40LACAF2-BO-AR	-	DN40CF	70	38	12.7	4
VPZ64CAF2-BO-AR	VPZ64CAF2-BO-NM-AR	DN63CF	114	63	17.4	5
VPZ100CAF2-BO-AR	VPZ100CAF2-BO-NM-AR	DN100CF	152	89	19.9	7
VPZ160CAF2-BO-AR	VPZ160CAF2-BO-NM-AR	DN160CF	203	136	22.3	11

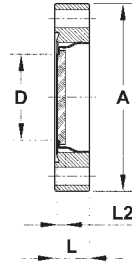
With antireflection coating, "V" coating

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16CAF2-BO-VAR	VPZ16CAF2-BO-NM-VAR	DN16CF	34	16	12.7	1.5
VPZ40CAF2-BO-VAR	VPZ40CAF2-BO-NM-VAR	DN40CF	70	32	12.7	3
VPZ40LACAF2-BO-VAR	-	DN40CF	70	38	12.7	4
VPZ64CAF2-BO-VAR	VPZ64CAF2-BO-NM-VAR	DN63CF	114	63	17.4	5
VPZ100CAF2-BO-VAR	VPZ100CAF2-BO-NM-VAR	DN100CF	152	89	19.9	7
VPZ160CAF2-BO-VAR	VPZ160CAF2-BO-NM-VAR	DN160CF	203	136	22.3	11

With antireflection coating, broadband

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16CAF2-BO-BBAR	VPZ16CAF2-BO-NM-BBAR	DN16CF	34	16	12.7	1.5
VPZ40CAF2-BO-BBAR	VPZ40CAF2-BO-NM-BBAR	DN40CF	70	32	12.7	3
VPZ40LACAF2-BO-BBAR	-	DN40CF	70	38	12.7	4
VPZ64CAF2-BO-BBAR	VPZ64CAF2-BO-NM-BBAR	DN63CF	114	63	17.4	5
VPZ100CAF2-BO-BBAR	VPZ100CAF2-BO-NM-BBAR	DN100CF	152	89	19.9	7
VPZ160CAF2-BO-BBAR	VPZ160CAF2-BO-NM-BBAR	DN160CF	203	136	22.3	11

Barium Fluoride Optically Polished, Unexchangeable Window



3

Technical data

- Specifications
- Connection
- Leak rate
- Window material
- Transmission range
- Temperature range
- Surface quality
- Flatness
- Magnetic type
 - flange material
- Non-magnetic type
 - flange material
- Coating
 - narrow band (1QWOT or "V" coating)
 - broadband

CF viewport with firmly connected barium fluoride window
 CF flange
 $< 1.0E-10$ mbar l/s
 barium fluoride
 0.15 - 12.5 μ m
 to 120 °C
 60/40 (scratch/dig)
 $< 4 \lambda$ (better surface quality and flatness on request)

stainless steel - 304L (1.4307)

stainless steel - 316LN (1.4429)
 detailed information see introduction
 possible coating range 194 - 1200 nm

Please add the required wavelength or wavelength range to the order code

Standard

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16BAF2-BO	VPZ16BAF2-BO-NM	DN16CF	34	16	12.7	2
VPZ40BAF2-BO	VPZ40BAF2-BO-NM	DN40CF	70	32	12.7	3
VPZ40LABAF2-BO	-	DN40CF	70	38	12.7	5
VPZ64BAF2-BO	VPZ64BAF2-BO-NM	DN63CF	114	63	17.4	7
VPZ100BAF2-BO	VPZ100BAF2-BO-NM	DN100CF	152	89	19.9	9
VPZ160BAF2-BO	VPZ160BAF2-BO-NM	DN160CF	203	136	22.3	14

Viewports with Defined Optical Quality

Barium Fluoride Optically Polished, Unexchangeable Window

With antireflection coating, 1QWOT

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16BAF2-BO-AR	VPZ16BAF2-BO-NM-AR	DN16CF	34	16	12.7	2
VPZ40BAF2-BO-AR	VPZ40BAF2-BO-NM-AR	DN40CF	70	32	12.7	3
VPZ40LABAF2-BO-AR	-	DN40CF	70	38	12.7	5
VPZ64BAF2-BO-AR	VPZ64BAF2-BO-NM-AR	DN63CF	114	63	17.4	7
VPZ100BAF2-BO-AR	VPZ100BAF2-BO-NM-AR	DN100CF	152	89	19.9	9
VPZ160BAF2-BO-AR	VPZ160BAF2-BO-NM-AR	DN160CF	203	136	22.3	14

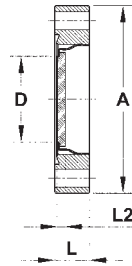
With antireflection coating, "V" coating

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16BAF2-BO-VAR	VPZ16BAF2-BO-NM-VAR	DN16CF	34	16	12.7	2
VPZ40BAF2-BO-VAR	VPZ40BAF2-BO-NM-VAR	DN40CF	70	32	12.7	3
VPZ40LABAF2-BO-VAR	-	DN40CF	70	38	12.7	5
VPZ64BAF2-BO-VAR	VPZ64BAF2-BO-NM-VAR	DN63CF	114	63	17.4	7
VPZ100BAF2-BO-VAR	VPZ100BAF2-BO-NM-VAR	DN100CF	152	89	19.9	9
VPZ160BAF2-BO-VAR	VPZ160BAF2-BO-NM-VAR	DN160CF	203	136	22.3	14

With antireflection coating, broadband

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16BAF2-BO-BBAR	VPZ16BAF2-BO-NM-BBAR	DN16CF	34	16	12.7	2
VPZ40BAF2-BO-BBAR	VPZ40BAF2-BO-NM-BBAR	DN40CF	70	32	12.7	3
VPZ40LABAF2-BO-BBAR	-	DN40CF	70	38	12.7	5
VPZ64BAF2-BO-BBAR	VPZ64BAF2-BO-NM-BBAR	DN63CF	114	63	17.4	7
VPZ100BAF2-BO-BBAR	VPZ100BAF2-BO-NM-BBAR	DN100CF	152	89	19.9	9
VPZ160BAF2-BO-BBAR	VPZ160BAF2-BO-NM-BBAR	DN160CF	203	136	22.3	14

Lithium Fluoride Optically Polished, Unexchangeable Window



3

Technical data

■ Specifications

■ Connection

■ Leak rate

■ Window material

■ Transmission range

■ Temperature range

■ Surface quality

■ Flatness

■ Magnetic type

- flange material

■ Non-magnetic type

- flange material

■ Coating

- narrow band (1QWOT or "V" coating)
- broadband

CF viewport with firmly connected lithium fluoride window

CF flange

< 1.0E-10 mbar l/s

lithium fluoride

0.12 - 6.0 μm

to 120 °C

60/40 (scratch/dig)

< 4 λ (better surface quality and flatness on request)

stainless steel - 304L (1.4307)

stainless steel - 316LN (1.4429)

detailed information see introduction

possible coating range 194 - 1200 nm

Please add the required wavelength

or wavelength range

to the order code

Standard

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16LIF2-BO	VPZ16LIF2-BO-NM	DN16CF	34	16	12.7	2
VPZ40LIF2-BO	VPZ40LIF2-BO-NM	DN40CF	70	32	12.7	5
VPZ40LALIF2-BO	-	DN40CF	70	38	12.7	7
VPZ64LIF2-BO	VPZ64LIF2-BO-NM	DN63CF	114	63	17.4	10
VPZ100LIF2-BO	VPZ100LIF2-BO-NM	DN100CF	152	89	19.9	14
VPZ160LIF2-BO	VPZ160LIF2-BO-NM	DN160CF	203	136	22.3	20

Viewports with Defined Optical Quality

Lithium Fluoride Optically Polished, Unexchangeable Window

With antireflection coating, 1QWOT

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16LIF2-BO-AR	VPZ16LIF2-BO-NM-AR	DN16CF	34	16	12.7	2
VPZ40LIF2-BO-AR	VPZ40LIF2-BO-NM-AR	DN40CF	70	32	12.7	5
VPZ40LALIF2-BO-AR	-	DN40CF	70	38	12.7	7
VPZ64LIF2-BO-AR	VPZ64LIF2-BO-NM-AR	DN63CF	114	63	17.4	10
VPZ100LIF2-BO-AR	VPZ100LIF2-BO-NM-AR	DN100CF	152	89	19.9	14
VPZ160LIF2-BO-AR	VPZ160LIF2-BO-NM-AR	DN160CF	203	136	22.3	20

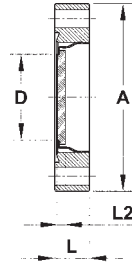
With antireflection coating, "V" coating

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16LIF2-BO-VAR	VPZ16LIF2-BO-NM-VAR	DN16CF	34	16	12.7	2
VPZ40LIF2-BO-VAR	VPZ40LIF2-BO-NM-VAR	DN40CF	70	32	12.7	5
VPZ40LALIF2-BO-VAR	-	DN40CF	70	38	12.7	7
VPZ64LIF2-BO-VAR	VPZ64LIF2-BO-NM-VAR	DN63CF	114	63	17.4	10
VPZ100LIF2-BO-VAR	VPZ100LIF2-BO-NM-VAR	DN100CF	152	89	19.9	14
VPZ160LIF2-BO-VAR	VPZ160LIF2-BO-NM-VAR	DN160CF	203	136	22.3	20

With antireflection coating, broadband

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16LIF2-BO-BBAR	VPZ16LIF2-BO-NM-BBAR	DN16CF	34	16	12.7	2
VPZ40LIF2-BO-BBAR	VPZ40LIF2-BO-NM-BBAR	DN40CF	70	32	12.7	5
VPZ40LALIF2-BO-BBAR	-	DN40CF	70	38	12.7	7
VPZ64LIF2-BO-BBAR	VPZ64LIF2-BO-NM-BBAR	DN63CF	114	63	17.4	10
VPZ100LIF2-BO-BBAR	VPZ100LIF2-BO-NM-BBAR	DN100CF	152	89	19.9	14
VPZ160LIF2-BO-BBAR	VPZ160LIF2-BO-NM-BBAR	DN160CF	203	136	22.3	20

IR Optics, Sapphire Optically Polished, Unexchangeable Window



3

Technical data

- Specifications
- Connection
- Leak rate
- Window material
- Transmission range
- Temperature range
- Surface quality
- Flatness
- Magnetic type
 - flange material
 - glass-to-metal connection
- Non-magnetic type
 - flange material
 - glass-to-metal connection
- Coating
 - narrow band (1QWOT or "V" coating)
 - broadband

CF viewport with firmly connected sapphire window
 CF flange
 $< 1.0E-10$ mbar l/s
 sapphire
 0.25 - 4.0 μm
 to 4500 °C
 60/40 (scratch/dig)
 $< 8 \lambda$ (better surface quality and flatness on request)

stainless steel - 304L (1.4307)
 Kovar®

stainless steel - 316LN (1.4429)
 tantalum
 detailed information see introduction
 possible coating range 194 - 1200 nm

Please add the required wavelength
 or wavelength range
 to the order code

Standard

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16S-MB	VPZ16S-MB-NM	DN16CF	34	16	12.7	1.5
VPZ40S-MB	VPZ40S-MB-NM	DN40CF	70	32	12.7	1.5
VPZ40LAS-MB	-	DN40CF	70	38	12.7	1.5
VPZ64S-MB	VPZ64S-MB-NM	DN63CF	114	63	17.4	2
VPZ100S-MB	VPZ100S-MB-NM	DN100CF	152	89	19.9	3
VPZ160S-MB	VPZ160S-MB-NM	DN160CF	203	136	22.3	4

Viewports with Defined Optical Quality

IR Optics, Sapphire Optically Polished, Unexchangeable Window

With antireflection coating, 1QWOT

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16S-MB-AR	VPZ16S-MB-NM-AR	DN16CF	34	16	12.7	1.5
VPZ40S-MB-AR	VPZ40S-MB-NM-AR	DN40CF	70	32	12.7	1.5
VPZ40LAS-MB-AR	-	DN40CF	70	38	12.7	1.5
VPZ64S-MB-AR	VPZ64S-MB-NM-AR	DN63CF	114	63	17.4	2
VPZ100S-MB-AR	VPZ100S-MB-NM-AR	DN100CF	152	89	19.9	3
VPZ160S-MB-AR	VPZ160S-MB-NM-AR	DN160CF	203	136	22.3	4

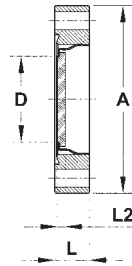
With antireflection coating, "V" coating

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16S-MB-VAR	VPZ16S-MB-NM-VAR	DN16CF	34	16	12.7	1.5
VPZ40S-MB-VAR	VPZ40S-MB-NM-VAR	DN40CF	70	32	12.7	1.5
VPZ40LAS-MB-VAR	-	DN40CF	70	38	12.7	1.5
VPZ64S-MB-VAR	VPZ64S-MB-NM-VAR	DN63CF	114	63	17.4	2
VPZ100S-MB-VAR	VPZ100S-MB-NM-VAR	DN100CF	152	89	19.9	3
VPZ160S-MB-VAR	VPZ160S-MB-NM-VAR	DN160CF	203	136	22.3	4

With antireflection coating, broadband

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16S-MB-BBAR	VPZ16S-MB-NM-BBAR	DN16CF	34	16	12.7	1.5
VPZ40S-MB-BBAR	VPZ40S-MB-NM-BBAR	DN40CF	70	32	12.7	1.5
VPZ40LAS-MB-BBAR	-	DN40CF	70	38	12.7	1.5
VPZ64S-MB-BBAR	VPZ64S-MB-NM-BBAR	DN63CF	114	63	17.4	2
VPZ100S-MB-BBAR	VPZ100S-MB-NM-BBAR	DN100CF	152	89	19.9	3
VPZ160S-MB-BBAR	VPZ160S-MB-NM-BBAR	DN160CF	203	136	22.3	4

IR Optics, Zinc Selenide Optically Polished, Unexchangeable Window



3

Technical data

- Specifications
- Connection
- Leak rate
- Window material
- Transmission range
- Temperature range
- Surface quality
- Flatness
- Magnetic type
 - flange material
 - glass-to-metal connection
- Non-magnetic type
 - flange material
 - glass-to-metal connection
- Coating
 - AR 10.6

CF viewport with firmly connected zinc selenide window
 CF flange
 $< 1.0E-10$ mbar l/s
 zinc selenide (optically polished)
 0.6 - 21.0 μm
 to 120 °C
 60/40 (scratch/dig)
 $< 2 \lambda$ (better surface quality and flatness on request)

stainless steel - 304L (1.4307)
 Kovar®

stainless steel - 316LN (1.4429)
 tantalum

for detailed information see introduction
 antireflection coating at 10.6 μm

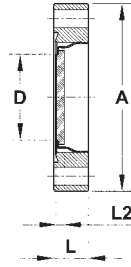
Standard

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ZNSE-BO	VPZ16ZNSE-BO-NM	DN16CF	34	16	12.7	1.5
VPZ40ZNSE-BO	VPZ40ZNSE-BO-NM	DN40CF	70	32	12.7	3
VPZ40LAZNSE-BO	-	DN40CF	70	38	12.7	3.75
VPZ64ZNSE-BO	VPZ64ZNSE-BO-NM	DN63CF	114	63	17.4	5
VPZ100ZNSE-BO	VPZ100ZNSE-BO-NM	DN100CF	152	89	19.9	6.5
VPZ160ZNSE-BO	VPZ160ZNSE-BO-NM	DN160CF	203	136	22.3	9.5

With antireflection coating, AR 10.6

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ZNSE-BO-AR-10600	VPZ16ZNSE-BO-NM-AR-10600	DN16CF	34	16	12.7	1.5
VPZ40ZNSE-BO-AR-10600	VPZ40ZNSE-BO-NM-AR-10600	DN40CF	70	32	12.7	3
VPZ40LAZNSE-BO-AR-10600	-	DN40CF	70	38	12.7	3.75
VPZ64ZNSE-BO-AR-10600	VPZ64ZNSE-BO-NM-AR-10600	DN63CF	114	63	17.4	5
VPZ100ZNSE-BO-AR-10600	VPZ100ZNSE-BO-NM-AR-10600	DN100CF	152	89	19.9	6.5
VPZ160ZNSE-BO-AR-10600	VPZ160ZNSE-BO-NM-AR-10600	DN160CF	203	136	22.3	9.5

IR Optics, Zinc Sulfide Optically Polished, Unexchangeable Window



3

Technical data

- Specifications
- Connection
- Leak rate
- Window material
- Transmission range
- Temperature range
- Surface quality
- Flatness
- Magnetic type
 - flange material
 - glass-to-metal connection
- Non-magnetic type
 - flange material
 - glass-to-metal connection
- Coating
 - AR 10.6

CF viewport with firmly connected zinc sulfide window
 CF flange
 $< 1.0E-10$ mbar l/s
 zinc sulfide
 0.37 - 13.5 μm
 to 120 °C
 60/40 (scratch/dig)
 $< 2 \lambda$ (better surface quality and flatness on request)

stainless steel - 304L (1.4307)
 Kovar®

stainless steel - 316LN (1.4429)
 tantalum

for detailed information see introduction
 antireflection coating at 10.6 μm

Standard

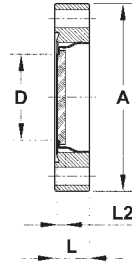
Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ZNS-BO	VPZ16ZNS-BO-NM	DN16CF	34	16	12.7	1.5
VPZ40ZNS-BO	VPZ40ZNS-BO-NM	DN40CF	70	32	12.7	3
VPZ40LAZNS-BO	-	DN40CF	70	38	12.7	3.5
VPZ64ZNS-BO	VPZ64ZNS-BO-NM	DN63CF	114	63	17.4	5
VPZ100ZNS-BO	VPZ100ZNS-BO-NM	DN100CF	152	89	19.9	6
VPZ160ZNS-BO	VPZ160ZNS-BO-NM	DN160CF	203	136	22.3	9.5

With antireflection coating, AR 10.6

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ZNS-BO-AR-10600	VPZ16ZNS-BO-NM-AR-10600	DN16CF	34	16	12.7	1.5
VPZ40ZNS-BO-AR-10600	VPZ40ZNS-BO-NM-AR-10600	DN40CF	70	32	12.7	3
VPZ40LAZNS-BO-AR-10600	-	DN40CF	70	38	12.7	3.5
VPZ64ZNS-BO-AR-10600	VPZ64ZNS-BO-NM-AR-10600	DN63CF	114	63	17.4	5
VPZ100ZNS-BO-AR-10600	VPZ100ZNS-BO-NM-AR-10600	DN100CF	152	89	19.9	6
VPZ160ZNS-BO-AR-10600	VPZ160ZNS-BO-NM-AR-10600	DN160CF	203	136	22.3	9.5

Viewports with Defined Optical Quality

IR Optics, Silicon Optically Polished, Unexchangeable Window



3

Technical data

- Specifications
- Connection
- Leak rate
- Window material
- Transmission range
- Temperature range
- Surface quality
- Flatness
- Magnetic type
 - flange material
- Non-magnetic type
 - flange material

CF viewport with firmly connected silicon window
 CF flange
 $< 1.0E-10$ mbar l/s
 silicon optically polished
 1.2 - 15.0 μm
 to 120 °C
 20/10 (scratch/dig)
 $< 4 \lambda$ (better surface quality and flatness on request)

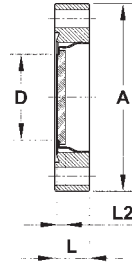
stainless steel - 304L (1.4307)

stainless steel - 316LN (1.4429)

Standard

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16SI-BO	VPZ16SI-BO-NM	DN16CF	34	16	12.7	2
VPZ40SI-BO	VPZ40SI-BO-NM	DN40CF	70	32	12.7	3
VPZ40LASI-BO	-	DN40CF	70	38	12.7	3
VPZ64SI-BO	VPZ64SI-BO-NM	DN63CF	114	63	17.4	4
VPZ100SI-BO	VPZ100SI-BO-NM	DN100CF	152	89	19.9	4.5
VPZ160SI-BO	VPZ160SI-BO-NM	DN160CF	203	136	22.3	7.5

IR Optics, Germanium Optically Polished, Unexchangeable Window



Technical data

- Specifications
- Connection
- Leak rate
- Window material
- Transmission range
- Temperature range
- Surface quality
- Flatness
- Magnetic type
 - flange material
- Non-magnetic type
 - flange material

CF viewport with firmly connected germanium window
 CF flange
 $< 1.0E-10$ mbar l/s
 germanium optically polished
 1.8 - 23.0 μm
 to 120 °C
 20/10 (scratch/dig)
 $< 4 \lambda$ (better surface quality and flatness on request)

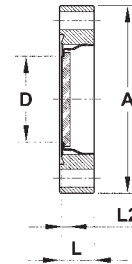
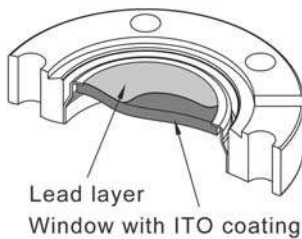
stainless steel - 304L (1.4307)

stainless steel - 316LN (1.4429)

Standard

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16GE-BO	VPZ16GE-BO-NM	DN16CF	34	16	12.7	2
VPZ40GE-BO	VPZ40GE-BO-NM	DN40CF	70	32	12.7	3
VPZ40LAGE-BO	-	DN40CF	70	38	12.7	3
VPZ64GE-BO	VPZ64GE-BO-NM	DN63CF	114	63	17.4	4
VPZ100GE-BO	VPZ100GE-BO-NM	DN100CF	152	89	19.9	4.5
VPZ160GE-BO	VPZ160GE-BO-NM	DN160CF	203	136	22.3	7.5

Borosilicate, Unexchangeable Window



3

Technical data

- Specifications
- Connection
- Leak rate
- Window material
- Transmission range
- Temperature range
- Surface quality
- Flatness
- Magnetic type
 - flange material
- Non-magnetic type
 - flange material
- Coating
 - ITO
 - RHEED screen

CF viewport with firmly connected borosilicate window
 CF flange
 $< 1.0E-10$ mbar l/s
 borosilicate
 0.4 - 2.0 μm
 to 350 °C
 80/50 (scratch/dig)
 $< 4 \lambda$

stainless steel - 304L (1.4307)

stainless steel - 316LN (1.4429)
 for detailed information see introduction
 ITO + phosphor (standard phosphor types are P11, P20, P22 and P43, further types on request)

With ITO coating

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ITO-MB	VPZ16ITO-MB-NM	DN16CF	34	16	12.7	1
VPZ40ITO-MB	VPZ40ITO-MB-NM	DN40CF	70	32	12.7	2.5
VPZ40LAITO-MB	-	DN40CF	70	38	12.7	3
VPZ64ITO-MB	VPZ64ITO-MB-NM	DN63CF	114	63	17.4	3
VPZ100ITO-MB	VPZ100ITO-MB-NM	DN100CF	152	89	19.9	4
VPZ160ITO-MB	VPZ160ITO-MB-NM	DN160CF	203	136	22.3	6.5

With ITO coating and lead glass screen

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ITOLG-MB	VPZ16ITOLG-MB-NM	DN16CF	34	16	12.7	1
VPZ40ITOLG-MB	VPZ40ITOLG-MB-NM	DN40CF	70	32	12.7	2.5
VPZ64ITOLG-MB	VPZ64ITOLG-MB-NM	DN63CF	114	63	17.4	3
VPZ100ITOLG-MB	VPZ100ITOLG-MB-NM	DN100CF	152	89	19.9	4
VPZ160ITOLG-MB	VPZ160ITOLG-MB-NM	DN160CF	203	136	22.3	6.5

Viewports with Electrical Conductive Layers

Borosilicate, Unexchangeable Window

With ITO coating and RHEED screen (P11)

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ITO-MB-11	VPZ16ITO-MB-NM-11	DN16CF	34	16	12.7	1
VPZ40ITO-MB-11	VPZ40ITO-MB-NM-11	DN40CF	70	32	12.7	2.5
VPZ40LAITO-MB-11	-	DN40CF	70	38	12.7	3
VPZ64ITO-MB-11	VPZ40ITO-MB-NM-11	DN63CF	114	63	17.4	3
VPZ100ITO-MB-11	VPZ64ITO-MB-NM-11	DN100CF	152	89	19.9	4
VPZ160ITO-MB-11	VPZ160ITO-MB-NM-11	DN160CF	203	136	22.3	6.5

With ITO coating and RHEED screen (P20)

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ITO-MB-20	VPZ16ITO-MB-NM-20	DN16CF	34	16	12.7	1
VPZ40ITO-MB-20	VPZ40ITO-MB-NM-20	DN40CF	70	32	12.7	2.5
VPZ40LAITO-MB-20	-	DN40CF	70	38	12.7	3
VPZ64ITO-MB-20	VPZ64ITO-MB-NM-20	DN63CF	114	63	17.4	3
VPZ100ITO-MB-20	VPZ100ITO-MB-NM-20	DN100CF	152	89	19.9	4
VPZ160ITO-MB-20	VPZ160ITO-MB-NM-20	DN160CF	203	136	22.3	6.5

With ITO coating and RHEED screen (P22)

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ITO-MB-22	VPZ16ITO-MB-NM-22	DN16CF	34	16	12.7	1
VPZ40ITO-MB-22	VPZ40ITO-MB-NM-22	DN40CF	70	32	12.7	2.5
VPZ40LAITO-MB-22	-	DN40CF	70	38	12.7	3
VPZ64ITO-MB-22	VPZ64ITO-MB-NM-22	DN63CF	114	63	17.4	3
VPZ100ITO-MB-22	VPZ100ITO-MB-NM-22	DN100CF	152	89	19.9	4
VPZ160ITO-MB-22	VPZ160ITO-MB-NM-22	DN160CF	203	136	22.3	6.5

With ITO coating and RHEED screen (P43)

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ITO-MB-43	VPZ16ITO-MB-NM-43	DN16CF	34	16	12.7	1
VPZ40ITO-MB-43	VPZ40ITO-MB-NM-43	DN40CF	70	32	12.7	2.5
VPZ40LAITO-MB-43	-	DN40CF	70	38	12.7	3
VPZ64ITO-MB-43	VPZ64ITO-MB-NM-43	DN63CF	114	63	17.4	3
VPZ100ITO-MB-43	VPZ100ITO-MB-NM-43	DN100CF	152	89	19.9	4
VPZ160ITO-MB-43	VPZ160ITO-MB-NM-43	DN160CF	203	136	22.3	6.5

Viewports with Electrical Conductive Layers

Borosilicate, Unexchangeable Window

With ITO coating and RHEED screen (P11) and lead screen

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ITOLG-MB-11	VPZ16ITOLG-MB-NM-11	DN16CF	34	16	12.7	1
VPZ40ITOLG-MB-11	VPZ40ITOLG-MB-NM-11	DN40CF	70	32	12.7	2.5
VPZ40LAITOLG-MB-11	-	DN40CF	70	38	12.7	3
VPZ64ITOLG-MB-11	VPZ64ITOLG-MB-NM-11	DN63CF	114	63	17.4	3
VPZ100ITOLG-MB-11	VPZ100ITOLG-MB-NM-11	DN100CF	152	89	19.9	4
VPZ160ITOLG-MB-11	VPZ160ITOLG-MB-NM-11	DN160CF	203	136	22.3	6.5

With ITO coating and RHEED screen (P20) and lead screen

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ITOLG-MB-20	VPZ16ITOLG-MB-NM-20	DN16CF	34	16	12.7	1
VPZ40ITOLG-MB-20	VPZ40ITOLG-MB-NM-20	DN40CF	70	32	12.7	2.5
VPZ40LAITOLG-MB-20	-	DN40CF	70	38	12.7	3
VPZ64ITOLG-MB-20	VPZ64ITOLG-MB-NM-20	DN63CF	114	63	17.4	3
VPZ100ITOLG-MB-20	VPZ100ITOLG-MB-NM-20	DN100CF	152	89	19.9	4
VPZ160ITOLG-MB-20	VPZ160ITOLG-MB-NM-20	DN160CF	203	136	22.3	6.5

With ITO coating and RHEED screen (P22) and lead screen

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ITOLG-MB-22	VPZ16ITOLG-MB-NM-22	DN16CF	34	16	12.7	1
VPZ40ITOLG-MB-22	VPZ40ITOLG-MB-NM-22	DN40CF	70	32	12.7	2.5
VPZ40LAITOLG-MB-22	-	DN40CF	70	38	12.7	3
VPZ64ITOLG-MB-22	VPZ64ITOLG-MB-NM-22	DN63CF	114	63	17.4	3
VPZ100ITOLG-MB-22	VPZ100ITOLG-MB-NM-22	DN100CF	152	89	19.9	4
VPZ160ITOLG-MB-22	VPZ160ITOLG-MB-NM-22	DN160CF	203	136	22.3	6.5

With ITO coating and RHEED screen (P43) and lead screen

Order code		Flange	A	D	L	L2
Magnetic	Non-magnetic					
VPZ16ITOLG-MB-43	VPZ16ITOLG-MB-NM-43	DN16CF	34	16	12.7	1
VPZ40ITOLG-MB-43	VPZ40ITOLG-MB-NM-43	DN40CF	70	32	12.7	2.5
VPZ40LAITOLG-MB-43	-	DN40CF	70	38	12.7	3
VPZ64ITOLG-MB-43	VPZ64ITOLG-MB-NM-43	DN63CF	114	63	17.4	3
VPZ100ITOLG-MB-43	VPZ100ITOLG-MB-NM-43	DN100CF	152	89	19.9	4
VPZ160ITOLG-MB-43	VPZ160ITOLG-MB-NM-43	DN160CF	203	136	22.3	6.5