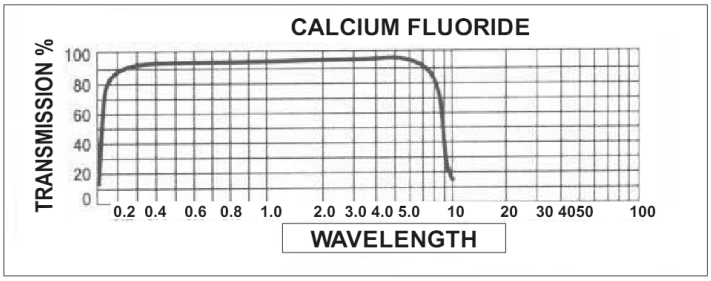
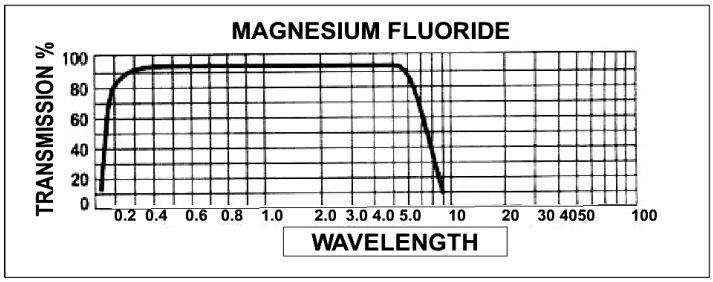
Special Material Viewports: Calcium Fluoride, Magnesium Fluoride and Zinc Selenide

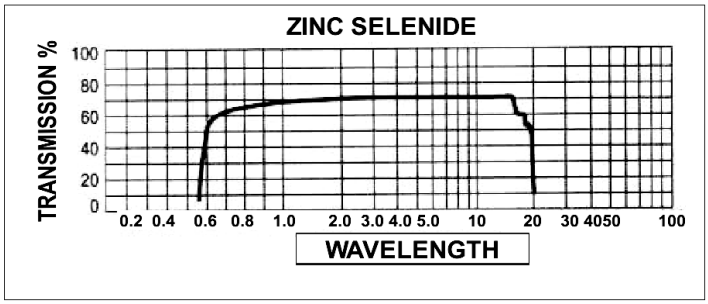
UHV Viewports made of Special Materials are available when other wavelengths than standard glass or quartz are needed. Calcium-Fluoride and Magnesium-Fluoride cover a wide transmission range from UV to Infrared down to 20μm (see the transmission curves below).

	CaF2	MgF2	ZnSe
Vacuum	UHV, 10^{-10} mbar (10^{-9} for KF /ISO-K)	UHV, 10^{-10} mbar (10^{-9} for KF /ISO-K)	UHV, 10^{-10} mbar (10^{-9} for KF /ISO-K)
Temperature	-100°... 200°C (-40°...150°C for KF/ ISO-K)	-100°... 200°C (-40°...150°C for KF/ ISO-K)	-100°... 200°C -100° … 150°C for coated (-40°...150°C for KF/ ISO-K)
Transmission	150nm … 9μm	180nm … 8μm	600nm … 20μm
Parallelism	<3 Arc Minutes	<3 Arc Minutes	<3 Arc Minutes
Flatness	λ/4 at 632nm	λ/4 at 632nm	λ/4 at 632nm
Sufrace finish	20/10 Scratch/Dig	20/10 Scratch/Dig	40/20 Scratch/Dig

Transmission Curves

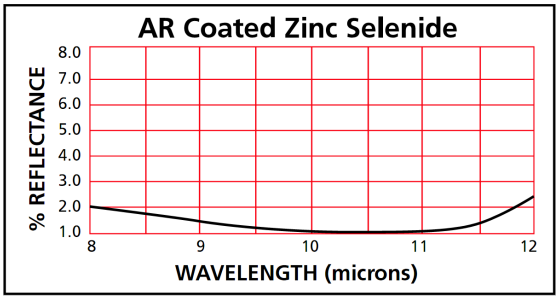






The standard coating for ZnSe is a Broad Band AR (for 8 - 12 μm); the reflection loss is <0.5% per surface.

Please note that coated viewports are bakeable to 150°C only.



Last revised 2011-09-16 File: 130-CaF-MgF-ZnSe

All data given in this sheet are carefully checked but are open to change at any time.

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