ZnSe domes

- **High transmission at 3-12 μm**
- **Ideal for thermally demanding environments**

Zinc Selenide (ZnSe) domes is an excellent choice for its broad wavelength range (3 μm to 16 μm), which covers MWIR and LWIR wavelength range. **Zinc selienide** is a chemically vapor diposited material commonly used in thermal imaging and medical systems. Zinc selenide (ZnSe) windows has a high index of refraction which normally requires an anti-reflection coating to achieve high transmission. Zinc selenide is relatively soft with low scratch resistance thus not recommended for use in harsh enviornment.

SPECIFICATIONS

Specifications	
Materials	Hot-pressed ZnS
Diameter range	~ 280mm
Thickness Tolerance	+/-0.2mm (Optional: +/-0.1mm and +/-0.05mm)
Surface Quality	60/40 S/D
Frings (N)	customized
Irregularity (deta N)	customized
Chamfer	0.1~0.3mmx45degree
Coating	AR/AR@7-12μm

Note: the domes of other specifications is available upon customer's request.

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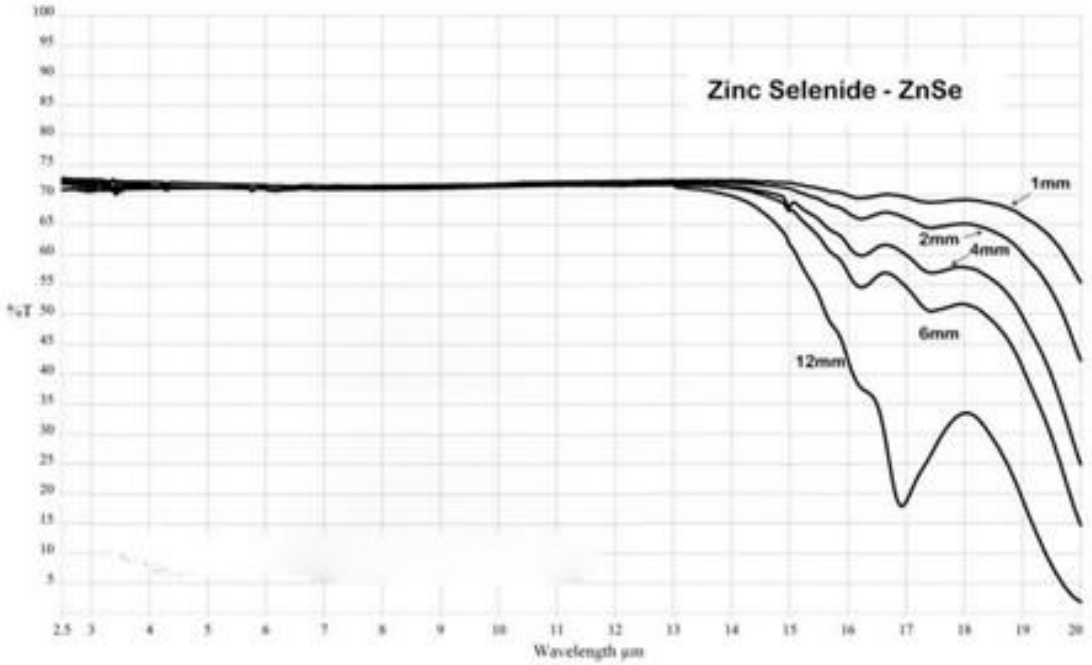
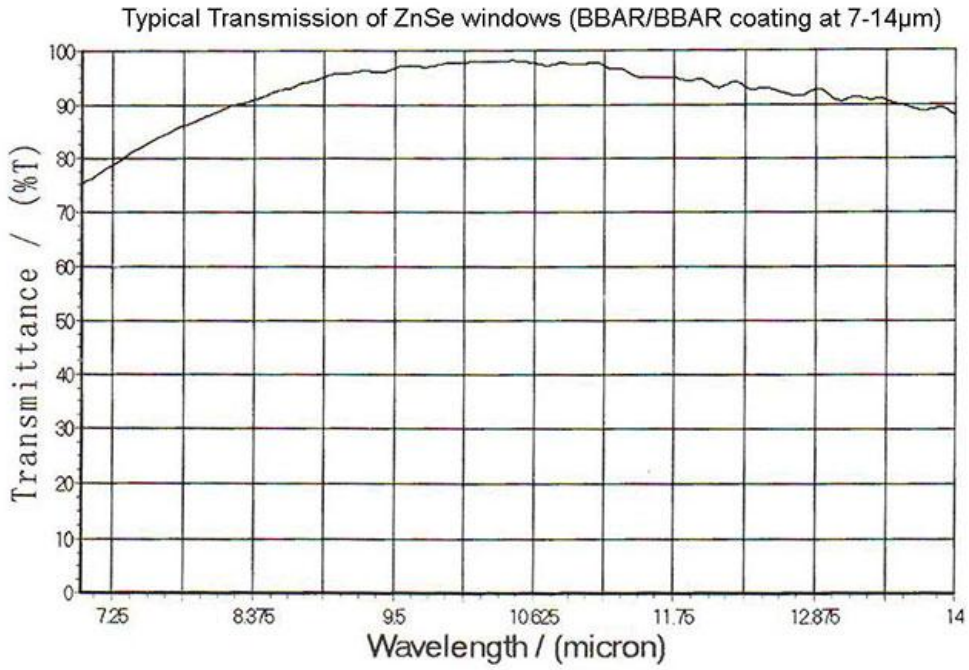
1) Transmission curve of the ZnSe windows no coating



2) Transmission curve of ZnSe windows with BBAR/BBAR coating



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Basic Properties

Physical and optical properties	
Transmission Range	0.6 to 21.0 μm
Refractive Index	2.4028 at 10.6 μm
Reflection Loss	29.1% at 10.6 μm (2 surfaces)
Absorption Coefficient	0.0005 cm-1 at 10.6 μm
Reststrahlen Peak	45.7 μm
dn/dT	+61 x 10-6/°C at 10.6 μm at 298K
dn/dμ = 0	5.5 μm
Density	5.27 g/cc
Melting Point	1525°C (see notes below)
Thermal Conductivity	18 W m-1 K-1 at 298K
Thermal Expansion	7.1 x 10-6 /°C at 273K
Hardness	Knoop 120 with 50g indenter
Specific Heat Capacity	339 J Kg-1 K-1
Dielectric Constant	n/a
Youngs Modulus (E)	67.2 GPa
Shear Modulus (G)	n/a
Bulk Modulus (K)	40 GPa
Elastic Coefficients	Not Available
Apparent Elastic Limit	55.1 MPa (8000 psi)
Poisson Ratio	0.28
Solubility	0.001g/100g water
Molecular Weight	144.33
Class/Structure	HIP polycrystalline cubic, ZnS, F43m

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