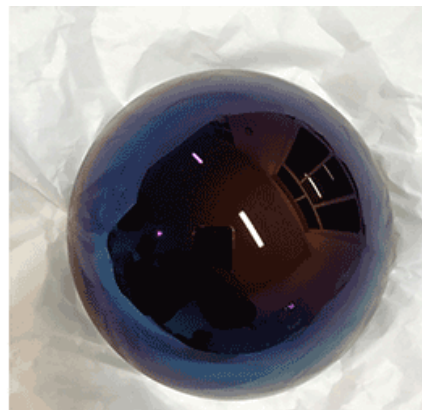


## Hot-pressed ZnS domes for defense and aerospace

- **Good infrared transmission**
- **Good thermal property**
- **High impact overloading resistance**

Hot-pressed Polycrystalline Zinc Sulphide is a kind of infrared optical material with a wide transmittance range. It is prepared from high pure zinc sulphide raw material under vacuum and high temperature condition. It possesses good infrared transmission and thermal property and high impact overloading resistance. Since it can be directly pressed into large size plates and spherical windows with various curvature radiuses, it has been extensively used in the infrared detector windows with various sizes. Besides, this product is still a kind of good coating material.



### Basic Properties

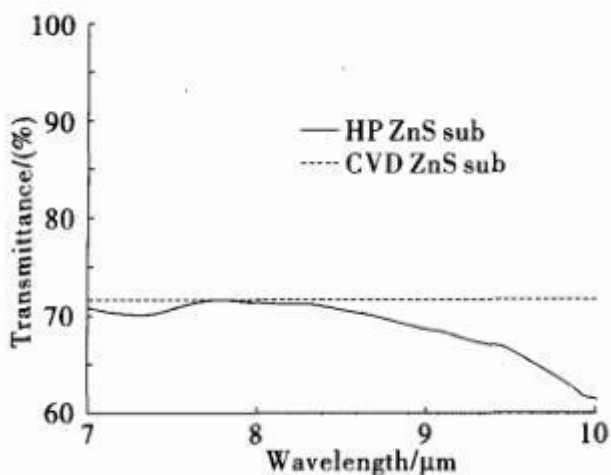
Physical and optical properties	
Transmission Range	>69%@3-5um, >70%@7.5-10.5um(6mm thick)
Density	4.089g/cm <sup>3</sup>
Rockwell Hardness	210-240kg/mm <sup>2</sup>
Bending strength	90-100MPa
Fracture Toughness	0.699MPa.m <sup>1/2</sup>
Youngs modules	74.5GPa
Poisson's Ratio	0.29
Expansion Coefficient	7.4x10 <sup>-6</sup> k <sup>-1</sup>
Melting Point	1830 °C (3)
Thermal Conductivity	0.17 W m <sup>-1</sup> K <sup>-1</sup>
Dielectric constant	8.347
Refractive Index	2.1986
Stress Birefringence	0nm/cm
Average absorption	2.5-5.5x10 <sup>-3</sup> @3-5um, 1-4.7x10 <sup>-3</sup> @7.5-10.5um

## 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.

### Transmission of Hot-pressed domes without coating



### Transmission of Hot-pressed ZnS domes with AR/AR coating

