

### Hot-pressed ZnS Domes


**Features:**

- Good infrared transmission at 7-10 $\mu$ m
- Good thermal property
- High impact overloading resistance
- Especially for defense, security and aerospace application

**Descriptions:**

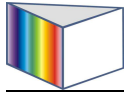
Hot-pressed Polycrystalline Zinc Sulphide is a kind of infrared optical material with a wide transmittance range. HP ZnS is made from high pure zinc sulphide raw material under vacuum and high temperature condition, which has good infrared transmission and thermal property and high impact overloading resistance. Since it can be directly pressed into large size plates and spherical dome windows with various curvature radius, HP ZnS has been widely used to make infrared detector dome windows for defenses, security and aerospace applications.

**Specifications:**

Materials	Hot-pressed MgF2	Diameter Range	~ 280mm
Thickness Tolerance	+/-0.2mm (Optional: +/-0.1mm and +/-0.05mm)	Surface Quality	60/40 S/D
Frings (N)	customized	Irregularity (delta N)	customized
Chamfer	0.1~0.3mmx45degree	Coating	Uncoated (Note: coating is unnecessary for its high transmission)

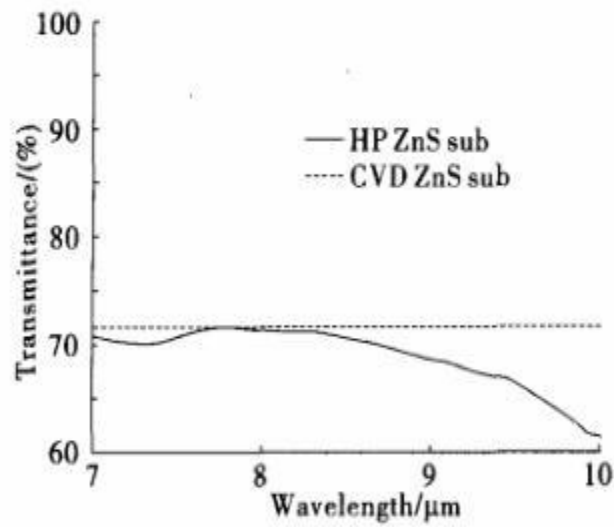
**Physical and Optical Properties:**

Transmission Range	0.7 to 9 $\mu$ m	Knoop Hardness	>539kg/mm <sup>2</sup>
Fracture Strength	96MPa	Compression Strength	>300MPa
Bending Strength	>90MPa	Density	>3.17g/cm <sup>3</sup>
Thermal Expansion	<1.3x10 <sup>-5</sup> K <sup>-1</sup> (25-300 $^{\circ}$ C)	Refractive Index	1.3812+/-0.005 (at 0.5893 $\mu$ m)
Transmittance	>85%(2-7.5 $\mu$ m)		

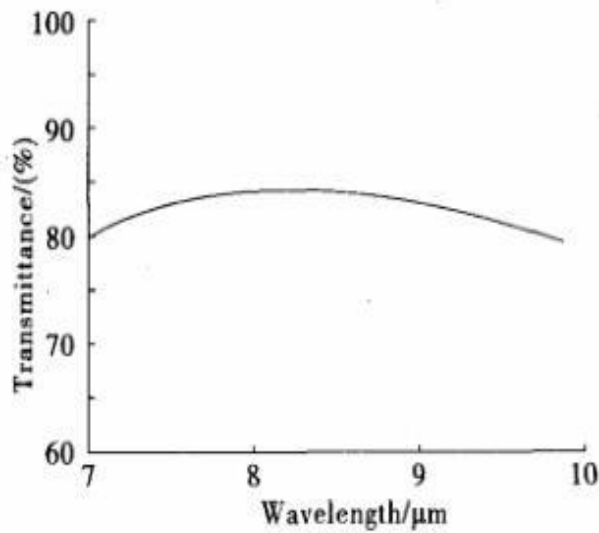


**Technical Images:**

1. Transmission of Hot-pressed domes without coating



2. Transmission of Hot-pressed ZnS domes with AR/AR coating



**Related products:**

- 1) Infrared domes-> hot-pressed MgF2 domes
- 2) Infrared domes -> sapphire domes
- 3) Infrared domes -> ZnSe domes