

# DATA SHEET Zinc Sulphide (ZnS) Windows - Multispectral

## ★ Physical Properties

Grain size, $\mu\text{m}$	2-100
Density, $\text{g}/\text{cm}^3$ , @298K	4.09
Chemical purity	>99.999%
CTE, $\text{K}^{-1}$ , @ 373 K	$7.0 \times 10^{-6}$
Thermal conductivity, $\text{Wcm}^{-1}\text{K}^{-1}$	0.27

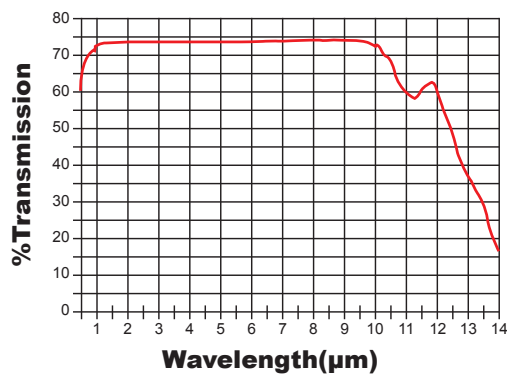
## ★ Mechanical Properties

Knoop Hardness, $\text{kg}/\text{mm}^2$	160
Flexural Strength, Mpa	74
Young's modulus, GPa	88
Poissons ratio	0.28

## ★ Optical Properties

Refractive index, @9 $\mu\text{m}$	2.219
Index of refraction inhomogeneity ( $\Delta n/n$ ), @ 0.6328 $\mu\text{m}$	$2 \times 10^{-5}$
Thermo-optic coefficient ( $dn/dT$ ), @3.39 $\mu\text{m}$ , (298-358K)	$3.9 \times 10^{-5}$
Bulk absorption coefficient, $\text{cm}^{-1}$ , 10.6 $\mu\text{m}$	<0.2

## ★ Transmission



## ★ Product Specifications

Shapes	Planar windows, spherical domes and lenses
Maximum size	For window: 600×350×20mm
	For dome: $\Phi 300 \times 15\text{mm}$
Surface quality	Polishing, or AR coating