PLEIGER

Zink Selenide (ZnSe)

1. General

The ZnSe lenses are made of high-quality material with lowest absorption values. An anti-reflective coating allows focusing of a high-power CO2 laser with excellent precision. For highest laser powers above 4 kW, we offer a low absorption AR/AR coating that minimises thermal lensing. ZnSe is also used for many IR components such as windows, prisms and lenses.

2. Material properties

Chemical symbol:	ZnSe
Molar weight:	144.33
Crystal structure:	Cubic, fcc
Density:	5.27 g/cm3
Melting point:	1525 °C
Heat capacity:	399 J kg^{-1} K^{-1}
Thermal conductivity:	18 W m^{-1} K^{-1}
Refractive index, 10.6µm	2.4028
Absorption coefficient, 10.6µm	0.0005 cm-1

3. Standard tolerances:

Diameter:	+/- 0.1 mm
Thickness:	+/- 0.2 mm
Parallelism:	< 3 arc min
Free aperture:	90 % of diameter

4. Surface quality:

Figure:	up to 1/10

5. Delivery forms

- planar
- spherical / aspherical
- cylindrical

6. Coatings

- Broadband AR for IR applications
- Laserline AR for IR lasers
- Output couplers for CO2 lasers

Safety advice: Zinc selenide oxidises from approx. 300 °C and decomposes from approx. 700 °C forming toxic gases. Zinc selenide optics should not be heated above 250 °C.

Pleiger Laseroptik GmbH & Co. KG | Im Hammertal 51 | D-58456 Witten
www.pleiger-laseroptik.de | info@ pleiger-laseroptik.de | +49 (2324) 398-406