ZnO

Zinc Oxide (ZnO) Crystal Substrate

DESCRIPTION

Zinc oxide is a wide band-gap semiconductor material. It has broad potential applications in high-efficiency semiconductor photoelectronic devices, semiconductor photocatalysis and diluted magnetic semiconductors. Because of it lattice integrity, ZnO single crystals are essential for the fabrication of high-quality ZnO-based semiconductor devices. It is also an ideal substrate material for epitaxial growth of various thin films.

FEATURE

- Wide band-gap semiconductor material
- Catalytic activity

APPLICATION

- Oxide and nitride deposition
- Semiconductor photoelectronic devices
- Diluted magnetic semiconductors
- Semiconductor photocatalysis

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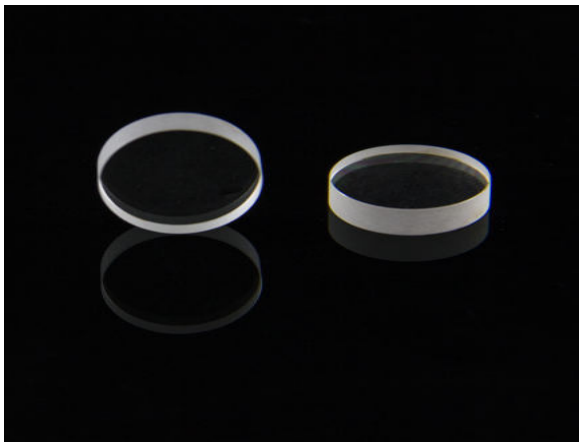
PARAMETER

Physical Properties

Type of Material	single crystal
Crystal Structure	hexagonal , a = b=3.252 Å, c = 5.313 Å
Molecular Weight	81.47
Refractive Index	no=1.3836,ne=1.3957@0.405μm
Reflective Loss	5，1%@4，0μm;11,2%@0.12μm
Density	5.7g/cm^3
Melting Point	1975°C
Thermal Conductivity	6W/(m·K)
Thermal Expansion	a: 6.5·10^{-6}/°C C:3.7·10^{-6}/°C @20°C
Hardness (Mohs)	4



Main Specifications

Size (mm)	5x5 mm, 10x10 mm, 25x25 mm, other sizes and orientations are available upon request
Surface roughness	Ra < 5A (AFM surface roughness measurement)
Surface polishing	Single side polished (SSP) or double side polished (DSP). CMP polishing on either O-face or Zn-face
Package	Packed with class 100 clean bag in class 1000 clean room