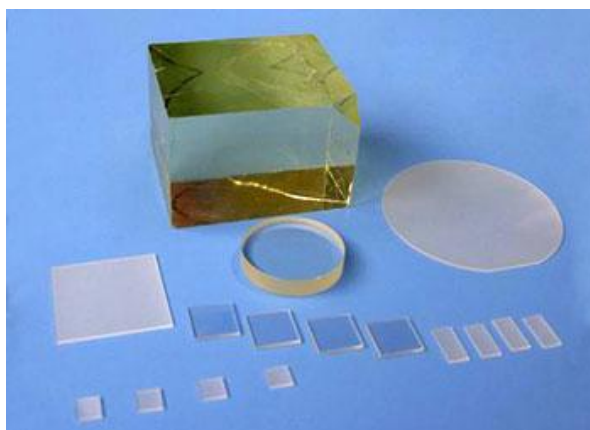


Magnesium Oxide (MgO) Crystals and Substrates

Magnesium Oxide (or MgO) is an excellent single crystal substrate for thin films of Ferro magnetic, Photo-electronic and high Tc superconductor materials. There is also a growing amount of interest in using these substrates, because of their economical cost, for other applications that previously would not have justified the higher cost of MgO, such as for use as substrates for the III to V elements. New applications are being found outside of the HTSC applications area, for example, in research studying the epitaxial effects of substrates on the crystallization of polymers. Other applications include the deposition of ferro electric thin film coatings on magnesium oxide substrates. And there are also growing applications for MgO in the field of plasma display panel (PDP) technology.



SPECIFICATIONS

Specifications	
Materials	MgO single crystals
Orientations	<100>, <110>, <111>
Orientations	±0.2° or ±0.5°
Standard size(mm)	5x5, 8x8, 15x15, 10x10, φ25.4; φ50.8
Thickness	0.5mm, 0.8mm or 1.0mm
Thickness tolerance	±0.05mm
Dimension tolerance	±0.05mm
Surface quality	20/10 S/D
Parallelism	<10 arc sec.
Perpendicularity	6 arc minutes
Wavefront distortion	<λ/4 @ 633nm

Note: The boules, blanks and polished substrates are available.

Basic Properties

Physical properties	
Crystal Structure	Cubic: $a = 4.216 \text{ \AA}$
Density	3.58 g/cm ³
Melt Point	2852 °C
Thermal expansion	12.8 (x10 ⁻⁶ /°C)
Purity	MgO 99.95%min
Transmission	>90%@200-400nm and >98%@500-1000nm