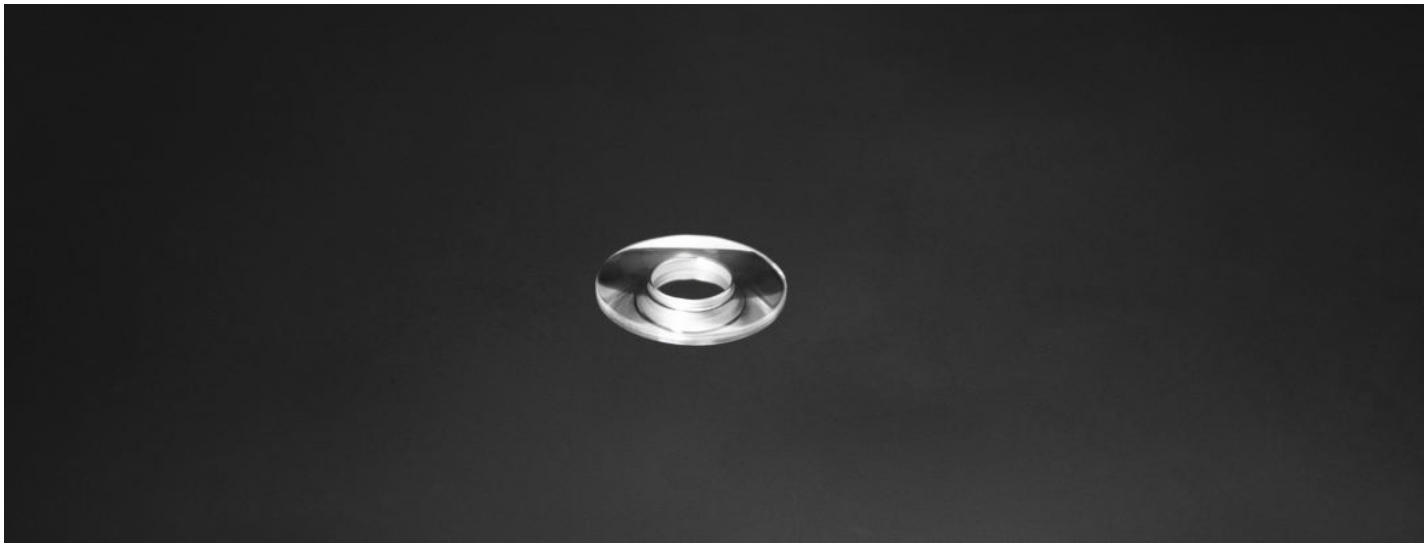
MgO

Magnesium Oxide (MgO) Crystal Substrate



DESCRIPTION

Magnesium oxide MgO single crystal as the dielectric constant and loss microwave band is very small, and can obtain a large area substrate (diameter of 2 inches and larger), it is currently an important industrial single-crystal substrates for the high-temperature superconducting thin films.

FEATURE

- Dielectric constant and loss microwave band
- An important industrial HTS thin monocrystalline substrate
- Stable physical performance

APPLICATION

- High temperature superconducting film
- Ferroelectric film
- Diamond growth
- Magnetic film (MRAM, TMR)
- Anti-reflective (AR) coating

www.wafer-crylink.com
sales@crylink.com
+86-21-69910952 / 69913696
No.200, Zhaoxian Road, Jiading District, Shanghai, China

MgO

PARAMETER

Physical Properties

Growth method	Special Arc Melting
Typical purity	0.9995
Crystal structure	Cubic
Unit cell constant	a = 4.212 Å
Melting point (°C)	2800
Crystal purity	0.9995
Density	3.58 (g/cm^3)
Hardness	5.5 (Mohs)
Thermal Expansion Coefficient, CTE (/K)	11.2 x 10^{-6}
Crystal orientation	(100), (110), (111)
Optical transmission	>90% (200~400nm), >98% (500~1000nm)
Dielectric constant	9.65

Main Specification

Sizes	10x10 mm, 20x20 mm, 1 inch diameter, 2 inch diameter, 3 inch MgO wafers and 4 inch MgO wafers are available upon request Special sizes and orientations are available upon request
Standard thickness	0.5mm or 1.0mm
Polishing	Single or double side polished (SSP or DSP)
Crystal orientation	+/- 0.5 degree
Surface roughness, Ra:	< 0.5 nm (5 μm x 5 μm area)
Package	packaged with class 100 clean bag in a class 1000 clean room