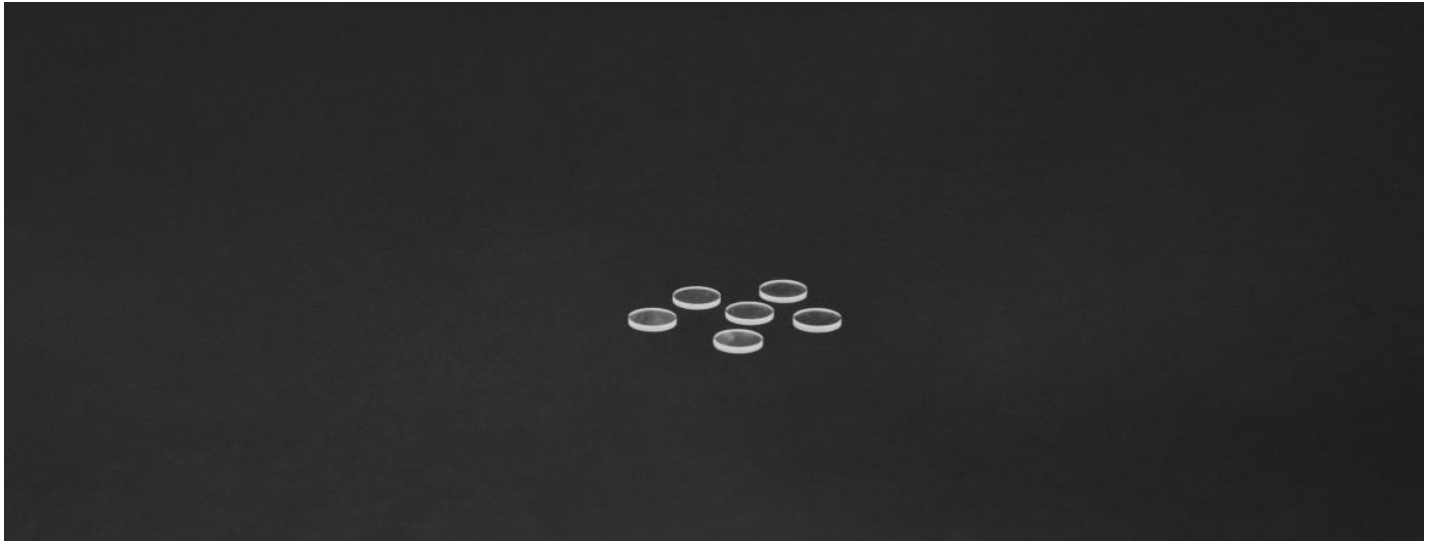


LiAlO₂

Lithium Aluminate (LiAlO₂) Crystal Substrate



DESCRIPTION

LiAlO₂ (Lithium Aluminate) crystal is the most important substrate for the high-temperature superconducting thin film. It matches very well with high temperatures superconducting materials such as YBaCuO and has the characteristics of low dielectric constant and low microwave loss.

LiAlO₂ is a potential substrate for III-V nitride thin films due to its excellent lattice mismatch to GaN (<1.4 % at <100>), chemical stability at high temperature and cost effective than ZnO. LiAlO₂ crystal can replace ZnO and sapphire as optical substrate. Lithium Aluminate (LiAlO₂) single crystal has a lower lattice mismatch with GaN crystal to be an excellent substrate for GaN film.

FEATURE

- Low dielectric constant
- Low microwave loss
- Chemical stability at high temperature

APPLICATION

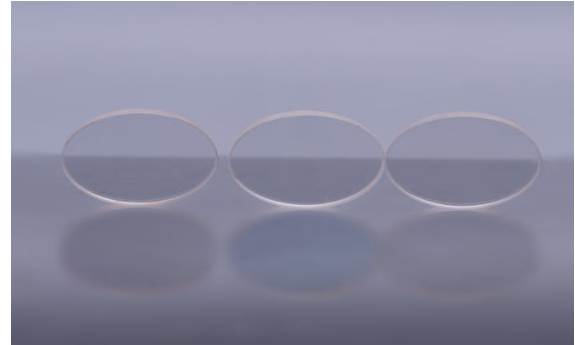
- High-temperature superconducting microwave electronic equipment
- Substrates for GaN films



PARAMETER

Physical Properties

Material	LiAlO ₂
Crystal Structure	M4
Lattice (A)	a=5.17, c=6.26
Density(g/cm ³)	2.62 g/cm ³
Melting Point	1900°C
Hardness	7.5(Mohns)



Main Specification

Size	10x3mm, 10x5mm, 10x10mm, 15x15mm, 20x15mm, 20x20mm D = 15, 20 mm, 1", 2"
Thickness	0.5mm, 1.0mm
Polishing	Single or double side polished
Crystal Orientation	<100> / <001>
Crystal orientation accuracy	+/- 0.5 °
Redirection the edge:	2 ° special in 1 °
Angle of crystal	Special size and orientation are available upon request
Ra:	~ (5 x 5 Å), epi-ready
Pack	Class 100 clean bag packed in class 1000 clean room