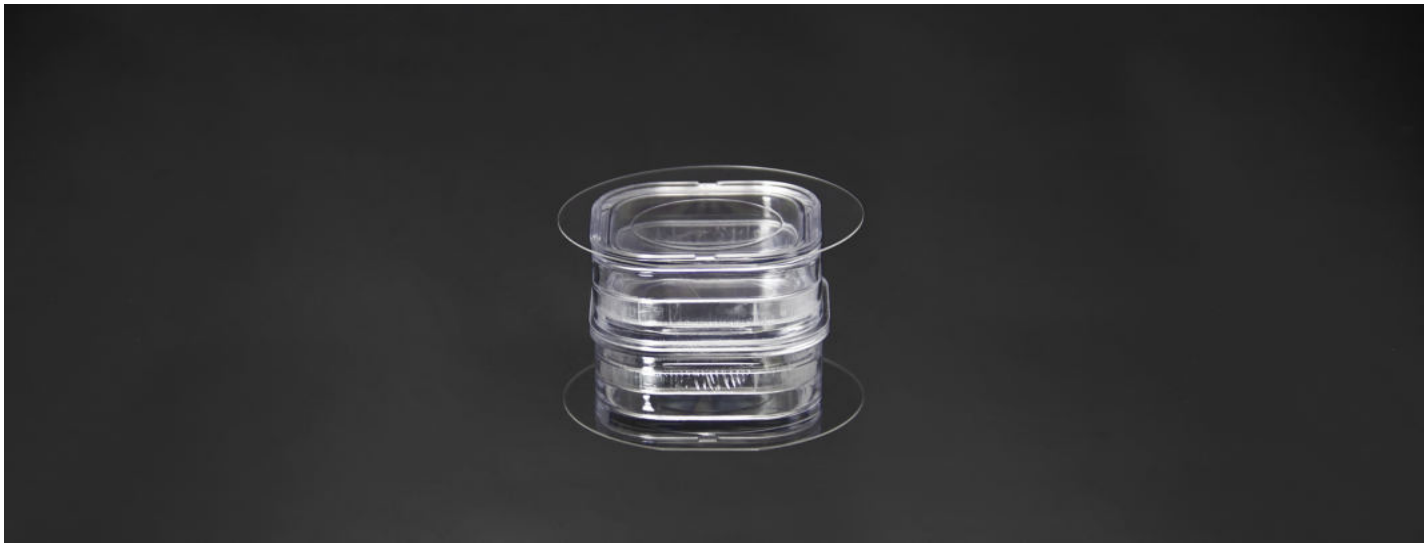
ScAlMgO4

Magnesium Aluminate Scandium ($ScAlMgO_4$) Crystal Substrate



DESCRIPTION

$ScAlMgO_4$ ($MgScAlO_4$,SCAM) crystals are hexagonal system, has a lattice constant a=0.3246nm, and c=2.5195nm. It has a rhombohedral layered structure similar to that of wurtzite nitride and zinc oxide. It is a new type of substrate material with the smallest lattice mismatch with GaN and ZnO. Its lattice mismatch ratio with GaN is about 1.8%, and the thermal expansion coefficient mismatch with GaN and ZnO epitaxial films is better than sapphire and silicon.

FEATURE

- Best lattice match with GaN and ZnO
- High transmisson after being polished
- High slope efficiency

APPLICATION

- A promising substrate material for GaN epitaxial growth
- Substrates for ZnO films

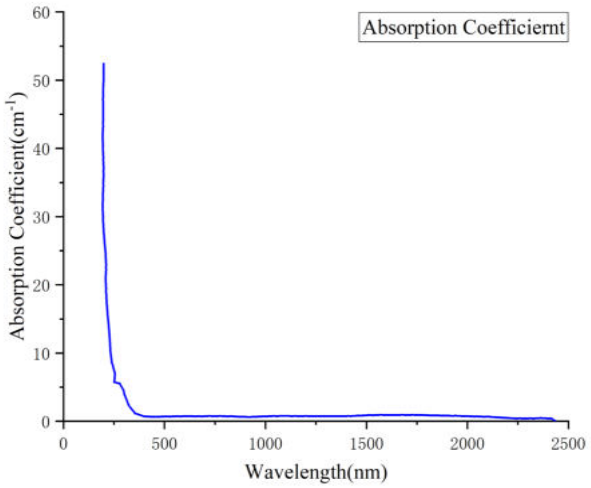
www.wafer-crylink.com
sales@crylink.com
+86-21-69910952 / 69913696
No.200, Zhaoxian Road, Jiading District, Shanghai, China

$ScAlMgO_4$

PARAMETER

Physical and chemicalcharacteristics

Properties	$ScMgAlO_4$
Crystal structure	hexagonal crystal system
Lattice constant	a=0.3246nm，c=2.5195nm
Density	3.64g/cm^3
Mohs hardness	4-5Mohs
Thermal expansion coefficient	A=7.45×10^{-6}/°C



Main Specification

Materials	$ScMgAlO_4$
Orientation	[0001] or [10-10] <±0.5°
Parallel	10″
Perpendicular	5′
surface Quality	10/5
Wavefront Distortion	λ/4@632nm
Surface Flatness	λ/8@632nm
Clear Aperture	>95%
Chamfer	<0.1×45°
Thickness/Diameter Tolerance	±0.05 mm
Maximum dimensions	dia 50×100mm
Coatings	AR/AR@940+1030; HR@1030+HT@940+AR1030