MgAl2O4 Magnesium aluminate (spinel)：

$MgAl_2O_4$ Magnesium aluminate (spinel)

$MgAl_2O_4$ Magnesium aluminate (spinel) single crystal is widely used in acoustic and microwave devices and fast IC epitaxial substrate.

Magnesium aluminate ($MgAl_2O_4$) can be used as a substrate for III-V nitride device thin films, and is also widely used in acoustic and microwave devices as well as fast IC epitaxial substrates. It can be used as one of the high-quality insulating lining substrates for ultra-high-speed large-scale integrated circuits.

Main features:

Magnesium aluminate (MgAl2O4) exhibits good lattice matching with epitaxial silicon films.

The self doping amount of aluminum atoms in the epitaxial silicon thin layer is small, the thermal stability is good, the expansion coefficient of silicon is relatively close, the hardness is small, and the processing performance is good.

Materials properties:

Growing directions	Czochralski method
Crystal structure	cube
Lattice constant	a=8.085Å
Melting point (℃)	2130℃
Density	3.64g/cm^3
Moh's hardness	8
Pigment	White transparent
Thermal expansion coefficient to	7.45×10^{-6}/℃
Crystal orientation	<100>,
Size	10x3，10x5，10x10，15x15，，20x15，20x20，Φ1″，Φ2″,
Thickness	0.5mm，1.0mm
Polishing	Single or double-sided
Crystal orientation	<100>、<110>、<111>±0.5°
Crystal face orientation precision:	±0.5°
Edge orientation precision:	2° (up to 1°)
Slant chip	The wafer with edge-oriented surfaces (1° -45°) can be processed at
Ra:	≤5Å（5μm×5μm）
Package	100 clean bag, 1000 ultra-clean room