

Yttrium aluminate (YAlO₃, YAP)

Yttrium aluminate (YAlO₃, YAP) single crystal is an important crystal matrix material similar to YAG single crystal with excellent optical and physical and chemical properties. YAP crystals doped with rare earth and transition metal ions are widely used in lasers, scintillation, and holography. Recording and optical data storage, ionizing radiation dosimeters and high-temperature superconducting film substrates and other fields.



PARAMETERS

Crystal Structure	Monoclinic
Lattice Constant	a=5.176 Å、b=5.307 Å、c=7.355 Å
Density	4.88 (g/cm ³)
Melting Point	1870℃
Dielectric Constant	16-20
Thermal Expansion	2-10×10 ⁻⁶ /K
Dimension	10x3mm, 10x5mm, 10x10mm, 15x15mm, 20x15mm, 20x20mm Dia1", Dia30mm
Thickness	0.5mm, 1.0mm
Polishing	One side or two sides
Orientation	<100>, <001> <010>, <110>
Crystal Plane Orientation Accuracy	±0.5°
Edge Orientation Accuracy	2° (Special requirements can reach within 1°)
Bevel Wafer	According to specific requirements, wafers with edge-oriented crystal planes inclined at a specific angle (inclination angle 1°-45°) can be processed.
Surface Roughness	Ra:≤5Å (5×5μm)
Package	Class 100 clean bag, Class 1000 super clean room