

## Strontium Tantalum Lanthanum Aluminate (La,Sr)(Al,Ta)O<sub>3</sub> (LSAT)

Strontium tantalum lanthanum aluminate (La,Sr)(Al,Ta)O<sub>3</sub> (LSAT) is a kind of more mature perovskite crystal, which is well matched with high-temperature superconductors and various oxide materials. It is expected to be as the substitute of the lanthanum aluminate (LaAlO<sub>3</sub>) and strontium titanate (SrTiO<sub>3</sub>), which will be used in giant magnetoelectric and superconducting devices in a large number of practical applications.



### PARAMETERS

Crystal Structure	Cubic
Lattice Constant	a=3.868 Å
Density	6.74 (g/cm <sup>3</sup> )
Melt Point	1840°C
Growth Method	Czochralski
Mohs Hardness	6.5 (mohs)
Thermal Expansion	10 × 10 <sup>-6</sup> /K
Dielectric Constant	ε=22
Orientation	<100> <110> <111> ±0.5°
Surface Roughness	R <sub>a</sub> ≤ 5Å (5 μm × 5 μm)
Regular Size and Tolerance	Rectangle: 10 x 3, 10 x 5, 10 x 10, 15 x 15, 20 x 15, 20 x 20 mm
	Round: Diameter 1", 2"
Thickness	0.5 mm, 1.0 mm
Polishing	Single or double
Package	Standard Packing: class 100 clean sealed bags. Special package is available on request.