



Niobium-doped Titanate Strontium Nb: SrTiO₃ :

Nb:SrTiO₃ Niobium-doped strontium titanate has similar structures with strontium titanate single crystals. At present, a single crystal substrate with niobium-doped concentration: 0.05wt%,0.1wt%,0.5wt%, 0.7 wt% Nb: SrTiO₃ can be provided.

Materials Properties:

Syngony	cubic system
Growing directions	Flame method
Lattice constant	a=3.905Å
Nb-doped concentration (Fe%)	0.05wt% , 0.1wt% , 0.5wt% , 0.7wt%
Melting point (°C)	2080
Density	5.122 (g/cm ³)
Hardness	6-6.5 (mohs)
Thermal expansion coefficient/°C	9.4×10 ⁻⁶
Dielectric constant	ε=5.20
Chemical stability	Do not dissolve in water
Thermal expansion coefficient	10.4×10 ⁻⁶ /k
Positive cut loss	~5×10 ⁻⁴ (300k) ~3×10 ⁻⁴ (77k)
Size	5×5m、10×5m、10×10mm、15×15mm、20×20mm
Thickness	0.5mm、1.0mm
Dimensional tolerance	<±0.1mm
Thickness deviation	Special requirements of <± 0.05mm up to <± 0.005mm)
Polishing	Single or double-sided
Conventional crystal orientation	<100>;<110> ;<111>
Crystal orientation error	+/-0.5 degrees, + / -0.3 degrees
Edge orientation accuracy	2° (Special requirements are within 1°)