

SrLaGaO₄ Single Crystal

Single crystals of SrLaGaO₄ are the attractive compounds used as substrates for high temperature superconductor thin films. High quality YBaCu, BiSrCaCuO, Bi(Pb)CaCuO and TlBaCaCuO thin films have been grown on SrLaGaO₄ substrates by different techniques.

TECHNICAL DATA

Crystal growth method	Czochralski
Crystal growth orientation	<100> ; <110> ; <001>
Maximum wafer diameter	< 1 inch
Standard sizes	10 mm x 10 mm
Standard thickness	0,5 ÷ 1 mm
Surface quality	one- or both side epipolished
CRYSTALLOGRAPHIC PROPERTIES	
Space group	I4/mmm
Crystallographic structure	tetragonal
Lattice constant	a = 0,3843 nm c = 1,2680 nm
Twinning structure	No
Colour	Colorless-Yellow
PHYSICAL PROPERTIES	
Density	6,389 g/cm ³
Melting point	1520°C
Hardness	at <001> : 7394 MPa at <100> : 7119 MPa
Thermal expansion coefficient	along a-axis : 10,05 x 10 ⁻⁶ K ⁻¹ along c-axis : 18,90 x 10 ⁻⁵ K ⁻¹
Dielectric constant	22
Dielectric loss tangent	5,7 x 10 ⁻⁵
Electrical character	dielectric

MTI Corporation

860 South 19th Street, Richmond, CA 94804, USA
Tel: (510)525-3070 Fax: (510)525-4058 E-mail: info@mtixtl.com Website: www.mtixtl.com