

## Substrates for Superconductor Thin Films

Single crystal substrates are available for deposition of a wide range of superconductor compounds. Special prepared SUPERSURFACE substrates with extrodinaty low roughness are available as well as large substrates. Special sizes, edge orientation, custom and off axis orientations are available in some compounds and can be prepared at a reasonable price.

### Physical Properties

Material	Crystal Type	Lattice Const Å a	Density (g/cm <sup>3</sup> )	M Pt C °	T E coef 10 <sup>-6</sup>	Dielectric Constant	Loss Tangent @ 10 GHz	Max Size
MgO	Cubic	4.216	3.58	2800	12.8	9.8	9 x 10 <sup>-3</sup>	3x3"
MgAl <sub>2</sub> O <sub>4</sub>	Cubic	8.083	3.60	2130	7.45			32mmØ
ZnO	Hex	3.252	5.605	1975	2.90			1x1mm
SrTiO <sub>3</sub>	Cubic	3.905	5.12	2080	10.3	300	2 x 10 <sup>-2</sup>	50mmØ
LaAlO <sub>3</sub>	Rhom	3.790	6.51	2180	9.2	24.5		3"Ø
NdGaO <sub>3</sub>	Ortho	5.43	7.57	1600	4.50	20	3 x 10 <sup>-3</sup>	2"Ø
SrLaAlO <sub>3</sub>	Tetrag	3.756		1348	4.65	16.8	6 x 10 <sup>-4</sup>	30
SrLaGaO <sub>3</sub>	Tetrag	3.84		1238	6.00	300		call
YAlO <sub>3</sub>	Ortho	5.176	6.1	1870	5.59	16-20	10 x 10 <sup>-4</sup>	25mmØ

YSZ	Cubic	5.41	5.8	2500	10.3	27	4" d
-----	-------	------	-----	------	------	----	------

**Sizes and Orientations Available**

Because each crystal is unique, maximum sizes and orientations available will vary. Please contact us for crystals for your specific requirements.