

NEW

KTN $(\text{KTa}_x\text{Nb}_{1-x}\text{O}_3)$ $x = 0 - 1$

High Performance Materials for Optical and Electrical Applications

Features

- ✓ Mutual Characteristics both KTaO_3 and KNbO_3
- ✓ Available for Custom Request of x



KTN Single Crystal

Ferroelectric

Properties

Applications

Large Dielectric Constants

Capacitor, Resonator

Piezoelectricity and Pyroelectricity

Transducer, Actuator, Optical Detector

Large Electro-Optic Effects by Pockels Effect

EO Switch, Photorefractive Devices

Paraelectric

by Kerr Effect

Optical Deflector, Vari-Focal Lens

Large Refractive Index

Ball Lens

Ta:Nb Ratio x

※ KTN crystals are products of NTT Advanced Technology Corp.

OXIDE

Oxide Corporation

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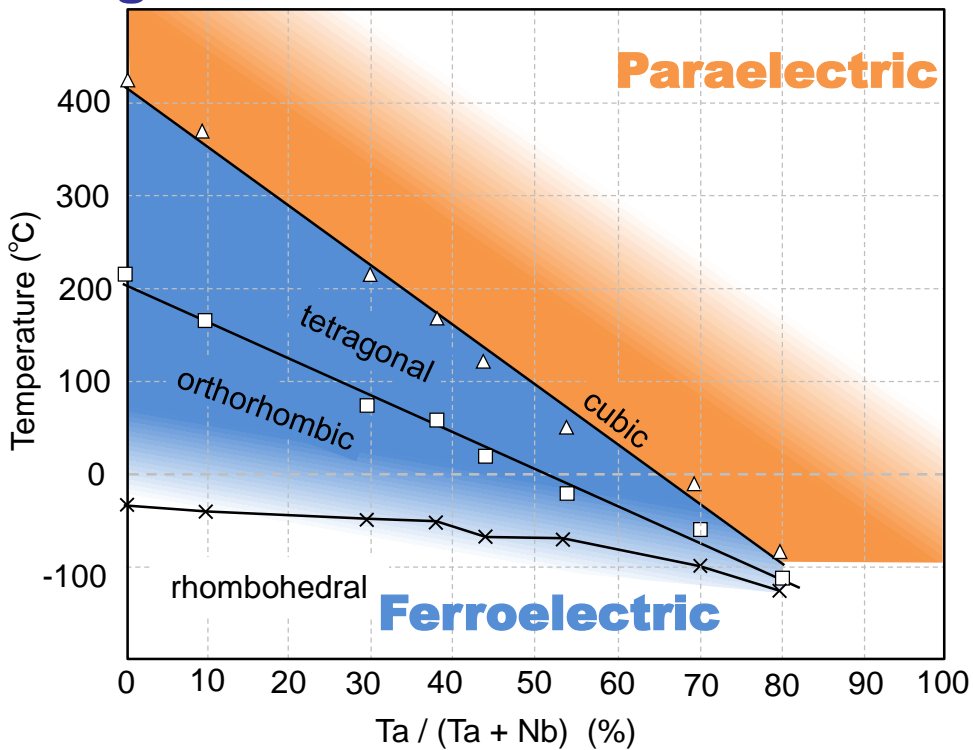
sales@opt-oxide.com, <http://www.opt-oxide.com>

Contents are things of 9-Sep-2015.

Properties

| | |
|--------------------------------------|--|
| Transmittance: | Nearly 100% @488 - 3500nm |
| Dielectric Constant: | Equal Level to BaTiO ₃ |
| Electro-Mechanical Coupling Constant | x17 Higher than LiTaO ₃ (In Case of x=0) |
| EO effect: | Pockels effect \propto (electric field) |
| | Kerr effect \propto (electric field) ² |
| Refractive Index: | 2.14 - 2.33 |

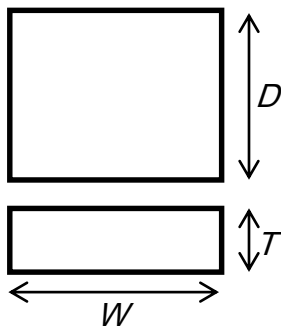
Phase Diagram



Standard Element

Size:

| |
|-------------------|
| W x D x T (mm) |
| 4.0 x 3.2 x 1.2 |
| 5.0 x 5.0 x 1.0 |
| 10.0 x 10.0 x 0.5 |



Composition:

Phase transition temperature between Cubic and Tetra.

$T_c = 10-50^\circ\text{C}$

(composition derived from T_c : $x = 0.61-0.69$)

[Contact for Custom Request](#)

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