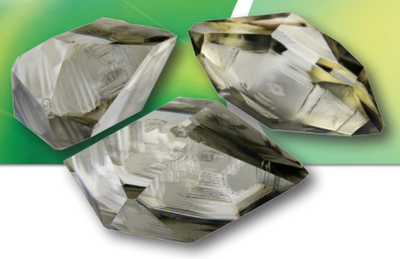
CRISTAL LASER®

Grown in France,

Manufactured in France, Sold all over the World.



KTA

Potassium Titanyle Arsenate – $KTiOAsO_4$

Applications

Operation	Advantages	Field of Application
Optical Parametric Oscillator	+ High Efficiency + High transmission in the 3-3.5µm range + Small walk-off	+ Eye-safe designators and range-finders with mid-high average powers + Spectroscopy, gas detection

Optical properties

Average refractive index	1.8

Coefficients in Sellmeier's equation

$$\left[n_i^2 = A_i + \frac{Bi\lambda^2}{(\lambda^2 - C_i^2)} - Di\lambda^2 \right]$$

for $0.4 < \lambda < 4$ µm

Index	A	B	C	D
n_x	1.90713	1.23522	0.19692	0.01025
n_y	2.15912	1.00099	0.21844	0.01096
n_z	2.14786	1.29559	0.22719	0.01436

Fenimore, Schepler, Ramadabran, McPherson,
J. Opt. Soc. Am. B Vol 12(5) 1995

Transparency range, µm	0.35 → 5.3
Residual absorption (PCI) at 1064nm:	<200 ppm/cm

Physical properties

Chemical formula		KTiOAsO4
Crystal structure		Orthorhombic
Point group		mm2
Lattice parameters, Å	a	13.12
	b	6.56
	c	10.79
Hardness (Mohs)		5.5
Hygroscopic susceptibility		none
Density, g.cm $^{-3}$		3.45
Resistivity (20°C, 20% Humidity), Ohm.cm		10^6
Aperture, mm^2:		from 1x1 to 10x10
Length, mm:		up to 20