KTA, titanium oxygen and potassium arsenate：

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KTA potassium titanium oxyarsenate KTiOAsO4 crystal is an excellent nonlinear material and one of the KTP crystals. Compared with KTP, KTA has a larger nonlinear optical coefficient, wider angle and temperature matching bandwidth; Capable of using Nd: YAG (1064nm) laser pumping to achieve non critical phase matching; It has lower conductivity and ion conductivity than KTP crystals, higher thermal conductivity, and does not produce thermal lensing effect during high-power laser pumping, making it suitable for high repetition frequency and high energy mid infrared output; The absorption loss of KTA in the spectral range from 3000 nm to 5000 nm is much lower than that of KTP crystals (solving the problem of the absorption peak of KTP crystals near 3.4 μ m), has high resistance to light damage and is widely used in optical parametric oscillators (OPO) in mid infrared.

Main features:

High damage resistance threshold

Wide angle and temperature bandwidth

Low dielectric constant and ion conductivity

0-4.0μM-band has less stable absorption performance

Large nonlinear optics and electro-optic coefficients, high conversion efficiency

Plating of antireflective films from visible light to 3300nm wavelength range

Can provide large-sized crystals, with a maximum size of 10 × ten × 30mm or 5 × five × 35mm

Material Properties:

Attribute	numeric value
Chemical formula	$KTiOAsO_4$
Crystal structure	Orthorhombic crystal system, point group mm2
Crystal lattice parameters	a=13.125Å, b=6.5716Å, c=10.786Å
Melting point	1130 ℃
Mohs hardness	Close to 5
Density	$3.454 g/cm^3$
Thermal conductivity	K1:1.8W/m/K; K2: 1.9W/m/K; K3: 2.1W/m/K

Product Parameter:

Dimensional tolerance	(W±0.1mm)x(H±0.1mm)x(L+0.5mm/-0.1mm)（L≥2.5mm） (W±0.1mm)x(H±0.1mm)x(L+0.1mm/-0.1mm)（L＜2.5mm）
Optical aperture	≧90%
Wavefront distortion	≦λ/8 @ 633nm
Flatness	λ/8 @ 633nm
Finish	10/5
Parallelism	≦20"
Verticality	≦5′
Angular deviation	Δθ≦0.25°,Δφ≦0.25°
Coating film	customized