CRYSTALS
Laser crystals
NLO Crystals
Passive Q-switch
Birefringent Crystals
Magneto-optical Crystals
Windows
OPTICS
Telecom Optics
Instrumental Optics
COATING SERVICE
PROCESSING SERVICE

Location: HOME PRODUCTS CRYSTALS NLO Crystals

KTP Crystal
(Potassium Titanyl Phosphate)

KTP crystals is the most commonly used material for frequency doubling of Nd-doped lasers, particularly at the low or medium power density.It is widely used for frequency mixing to generate Red/Green/Blue output, and for OPO and OPA to generate visible to mid-infrared tunable output. It is also used for many E-O devices such as Q-switches and E-O modulators.

Advantages:

- Large nonlinear optical coefficient
- Wide angular bandwidth and small walk-off angle
- Broad temperature and spectral bandwidth
- High Electro-Optics(E-O) coefficient and low dielectric constant
- Non-hygroscopic, chemically and mechanically stable

KTP's Applications

- Frequency Doubling (SHG) of Nd-doped Lasers for Green/Red Output
- Frequency Mixing (SFM) of Nd Laser and Diode Laser for Blue Output
- Parametric Sources (OPG, OPA and OPO) for 600nm - 4500nm Tunable Ouptut
- E-O Modulators, Optical Switches, Directional Couplers
- Optical Waveguides for Integrated NLO and E-O Devices

HGO offer KTP specification:

Tolerance of cutting angle	$\Delta\theta \leq \pm 0.25°, \Delta\varphi \leq \pm 0.25°$
Tolerance of dimension	Dimension+/-0.1 mm, L: ±0.1mm
Flatness	λ/8 @ 632.8nm
Wavefront distortion	λ/8@ 632.8nm
Surface quality	10/5 per MIL-O-13830A
Parallelism	10″
Perpendicularity	5′
Bevel/chamfer	<0.1mm@45deg.
Chips	<0.1mm
CA	>95%
Coating	AR/HR coating Upon customer’ s request
Damage Threshold	750MW/CM^2 at 1064nm, TEM00, 10ns, 10Hz
Warranty	One year under proper use