

KTP OPO Crystals



KTP OPO (Optical Parametric Oscillator) is the most efficient material for converting 1064 nm wavelength laser to 1572 nm ("eye safe") and other wavelengths.

Advantages

- Aperture - up to 40x40 mm²
- Length - up to 40 mm
- Available in Regular, Monolithic (Single and Double pass with Mirror coating), Plano-Plano and Confocal OPO configurations
- Non critical phase matching for eye-safe signal (1572 nm)
- No Walk-Off
- Efficiency of Monolithic OPO is 20-30% higher than a typical OPO
- Divergence of Laser with Confocal OPO is lower than Plano-Plano OPO
- Walk-Off Compensating (design WOC) available at 2.1 μm

Common Applications

- OPO, OPA
- Laser Range Finders (LRF)
- Laser designators
- LIDAR, space and other civil applications

Typical Specifications for OPO 1064 to 1570 nm

Aperture	Up to 40x40 mm ²
Orientation	$\Theta = 90^\circ$ $\varphi = 0^\circ$
Absorption Coefficient	$\alpha < 50 \text{ ppm cm}^{-1}$ at 1064 nm
Length	Up to 40 mm along X axis
Flatness	$\lambda/10$ @ 633 nm
Optical Wedge (polarization along Y axis)	10 arc sec.
Perpendicularity	10 arc min.
Scratch/Dig	10/5
AR Coatings	dual band $R < 0.2 \%$
Wavefront Distortion Control	$\lambda/4$ @ 633 nm
Guaranteed Damage Threshold	600 MW/cm ² (with coating) at 1064 nm, for 10 ns pulses

Raicol Crystals, founded in 1995, is a global leader in nonlinear and EO crystal growth, fabrication, and assembly. Raicol offers a unique set of benefits to its customers:

- 50 years of experience in crystal growth
- Global pioneers of RTP, HGTR KTP, and PPKTP crystal growth and assembly
- A one-stop-shop, from crystal growth through to coating and EO cell assembly
- Mass production and small R&D volume capabilities
- Fast delivery times
- Unmatched crystal quality