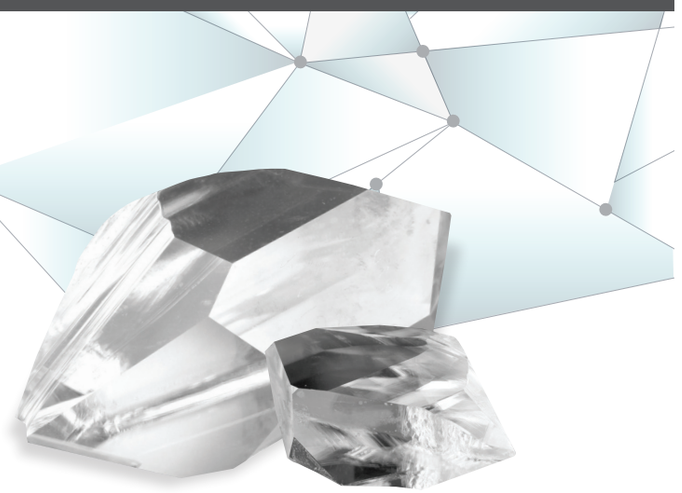
RAICOL CRYSTALS



HGTR KTP

High Gray Track Resistance Crystals

Raicol was the first to develop High Gray Track Resistance flux grown KTP crystals that enables higher average power density in SHG of 1000-1400 nm.
Gray tracks are produced when a crystal is subjected to high power, high repetition rate laser pulses or CW laser irradiation. The gray tracks occur due to induced color centers in the KTP crystal that have broad optical absorption in the visible and near infrared wavelengths, especially at 532 nm. The process of the gray track formation is cumulative and leads to deterioration of harmonic conversion.

Advantages

- Average output power density at 532 nm up to 5 kW/ cm^2 according to laser regime
- Nonlinear coefficient 4 times higher than LBO
- Low absorption at visible and near infrared wavelengths
- Broad temperature bandwidth
- Non-hygroscopic material
- Small walk off and wide angular bandwidth

Common Applications

Medium power green lasers for medical, industrial, scientific and other applications

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Typical Specifications

Apertures	up to 8 x 8 mm^2
Length	up to 12 mm
Flatness	λ/10
Parallelism	10 arc sec.
Perpendicularity	10 arc min.
Scratch/dig	10/5
AR coatings	dual band R<0.1 %
Absorption coefficient	< 50 ppm cm^{-1} at 1064 nm < 200 ppm cm^{-1} at 532 nm
Output average power density at 532 nm	up to 5 kW/ cm^2
Damage threshold	600 MW/ cm^2 at 1064 nm, for 10 ns pulses

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

- 50 years of crystal growth know-how and experience
- The global pioneers of RTP, HGTR KTP and PPKTP crystals and assembly
- One-stop shop, from crystal growth through coating to EO Cell assembly
- Mass-production capabilities as well as small R&D quantities
- Fast delivery time
- Unmatched crystal quality
- Custom designs upon request

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