RAICOL CRYSTALS

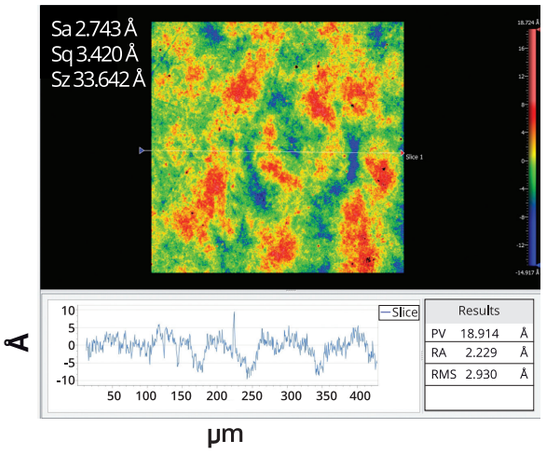
LBO Crystals

LBO (Lithium Triborate LiB_3O_5) is a nonlinear optical crystal ideally suitable for various nonlinear optical applications. LBO crystals combine wide transparency, moderately high nonlinear coupling, high damage threshold and good chemical and mechanical properties.

Special Advantages of our LBO:

- Super polished elements for excellent surface quality: roughness < **3**Å RMS and scratch dig 2/1
- Very low bulk absorption: up to 2ppm/cm at 1064nm
- Crystal size up to 50x50 mm^2 and maximum length of 40 mm
- Strict quality control

ROUGHNESS MEASUREMENTS
BY ZYGO INTERFEROMETER



Our LBO features:

- Wide transparency range (160nm – 2600nm)
- Moderately high nonlinear coefficient
- High damage threshold
- Type I and non-critical phase matching in a wide wavelength range
- High optical homogeneity
- Wide acceptance angle and small walk-off angle

Common Applications

- Second and third harmonic generation of high power diode pumped Nd:YAG and Nd:YLF lasers, Alexandrite, Ti:Sapphire, Dye lasers and ultrashort pulse lasers

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Typical Specifications:

Apertures	up to 50 x 50 mm^2
Length	up to 40 mm along X axis
Flatness	Up to λ/10
Roughness	<3Å RMS
Parallelism	Up to 5 arc sec.
Perpendicularity	Up to 5 arc min.
Scratch/dig	2/1 up to 0/0 per custom demand
AR coatings	dual band R < 0.1%
Absorption coefficient	<Bulk (1064_{nm}) =2-4 ppm/cm <Surface (1064_{nm}) = 1-2 ppm <Bulk (532_{nm}) = 8ppm/cm <Surface (532_{nm}) = 1-2 ppm
Wave front distortion control	λ/8@ 633 nm
Guaranteed Damage threshold	800 MW/cm^2 at 1064 nm 500 MW/cm^2 at 532 nm 300 MW/cm^2 at 355 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 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

Hamelacha 22, Rosh HaAyin, Israel | T:+972-3-9367412 | F:+972-3-9068969 | info@raicol.com
www.raicol.com