



**SUPER
POLISHED!**

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.

Advantages

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

Unique Advantages

- Super polished elements for excellent surface quality: roughness $< 6\text{\AA}$ and scratch dig 2/1
- Very low bulk absorption: up to 30ppm cm^{-1} at 1064nm
- Crystal size up to 25x25 mm and maximum length of 40 mm
- Strict quality control

Common Applications

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

Typical Specifications:

Apertures	up to 25 x 25 mm ²
Length	up to 40 mm along X axis
Flatness	Up to $\lambda/10$
Roughness	<6Å
Parallelism	Up to 5 arc sec.
Perpendicularity	Up to 5 arc min.
Scratch/dig	2/1 up to 0/0 per special demand
AR coatings	dual band R < 0.1%
Absorption coefficient	<50ppm cm ⁻¹ at 1064 nm down to 30ppm per special demand <100ppm cm ⁻¹ at 532 nm <600ppm cm ⁻¹ at 355 nm
Wave front distortion control	$\lambda/8@$ 633 nm
Guaranteed Damage threshold	MW/cm ² at 1064 nm 800 MW/cm ² at 532 nm 500 MW/cm ² at 355 nm 300 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