RAICOL CRYSTALS
An OXIDE company

BBO

Crystals and EO Cells

Beta-barium borate (BBO) is a versatile nonlinear crystal ideally suited for nonlinear laser interactions.
BBO crystals combine very wide transparency, high nonlinear coupling, high damage threshold and good chemical and mechanical properties. BBO phase matches over a wide range, yielding SHG, SFD and OPO from 190 to 1780 nm.

Advantages

- Very wide transparency range up to the deep UV
- High damage threshold
- High nonlinear coefficient
- High optical homogeneity
- Wide temperature-bandwidth

Common Applications

- Second, third, fourth, and fifth harmonic generation of ND: YAG lasers
- Second, third, and fourth harmonic generation of Ti: Sapphire and Alexandrite lasers
- SHG of Argon, Cu Vapor and Ruby lasers
- OPO of UV and visible wavelengths
- Electro optical cells

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Typical Specifications for BBO

Aperture	Up to 25x25 mm^2
Length	Up to 30 mm
Flatness	Up to λ/10 @633nm
Perpendicularity	Up to 5 arc min.
Parallelism	Up to 5 arc sec.
Scratch/Dig	10/5
AR Coatings	AR/AR, DBAR dual band R < 0.2 %
Absorption Coefficient	< 50ppm cm^{-1} @1064nm < 100ppm cm^{-1} @532nm
Wave Front Distortion Control	λ/8 @633 nm
Guaranteed Laser Induced Threshold	5 GW/cm^2 @1064 nm 1 GW/cm^2 @532 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

22 HaMelacha Street, Rosh HaAyin, Israel | Tel: +972-3-9068969 | info@raicol.com
www.raicol.com