

# NLO Crystals

## BBO Crystal

$\beta$ -BaB<sub>2</sub>O<sub>4</sub> (BBO) has excellent electro-optical (EO) properties and is suitable for use in the wavelength range of 200-2500 nm. Its low dielectric constant makes BBO ideal for use in solid-state lasers with high average power and high repetition rate. In addition to standard products, VoyaWave Optics provides different specifications of crystal devices that can be customized according to customer needs (please consult to purchase).

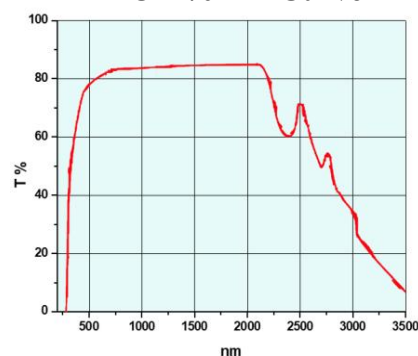
### Main features:

- High damage threshold
- Wide phase matching band range (410-3500 nm)
- High multiplier conversion rate (6 times more than KDP)
- High damage threshold

### Typical applications:

- Two- and three-fold and mixed frequencies for dye lasers
- Nd:YAG and Nd:YLF lasers multiplier
- Optical parametric amplifier (OPA) and optical parametric oscillator (OPO)
- Frequency doubling of ruby and argon ion lasers
- Deep ultraviolet (UV) laser, all solid-state tunable laser, and other fields

**BBO T%-nm Curve**



### Standard Products

Model	Size (mm)	$\theta$ (°)	$\Phi$ (°)	Coating
BBO 301	6 × 6 × 0.1	29.2	90	P/P @ 400-800 nm
BBO 302	6 × 6 × 0.2	29.2	90	P/P @ 400-800 nm
BBO 303	6 × 6 × 0.5	29.2	90	P/P @ 400-800 nm
BBO 304	6 × 6 × 1	29.2	90	P/P @ 400-800 nm

For more information about products click on: [www.voyawave.com](http://www.voyawave.com)

## Technical Parameters

Names of Parameters	Values & Ranges
Size tolerance	±0.1 mm
Dimension tolerance	$\Delta\theta < 0.5^\circ$ , $\Delta\phi < 0.5^\circ$
Clear aperture	> 90%
Surface quality	20/10
Flatness	$< \lambda/8$ @ 633 nm
Wavefront distortion	$< \lambda/4$ @ 633 nm
Parallelism	$< 20$ arc sec
Perpendicularity	$< 5$ arc min
Coating	AR, BBAR, P-coatings
Quality warranty period	1 year (under normal use)

See appendix P30 for more information