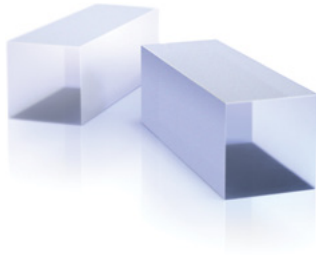


BBO Crystals



Description

Beta Barium Borate BBO is a non-linear optical crystal that combines a number of unique features.

These features of nonlinear BBO crystal include wide transparency and phase matching ranges, large non-linear coefficient, high damage threshold and excellent optical homogeneity. Therefore, BBO provides an attractive solution for various non-linear optical applications like OPO, OPA, OPCPA and other. As a result of large thermal acceptance bandwidth, high damage threshold and small absorption BBO is well suited for frequency conversion of high peak or average power laser radiation. The large spectral transmission range as well as phase matching, especially in UV range, makes BBO perfectly suitable for frequency doubling of Dye, Argon and Copper vapour laser radiation, effective cascade harmonic generation (Frequency doublers, triplers, parametric amplifiers and wave mixers) of wide spread Nd:YAG as well as of Ti:Sapphire and Alexandrite laser radiation. Both angle tuned Type 1 (oo-e) and Type 2 (eo-e) phase matching can be obtained increasing the number of advantages for different applications.

Features

- Broad phase-matchable second-harmonic-generation (SHG) range from 409.6 nm to 2500 nm
- Wide transparency range from 189 nm to 2600 nm
- Large effective SHG coefficient
- High damage threshold of 10 J/cm² for 10 ns pulse-width at 1064 nm
- Good mechanical and physical properties

Standard specifications

Transparency range	189-2600 nm
Dimensions tolerance	+0/-0.1 mm
Length tolerance	±0.1 mm
Orientation accuracy of cut angle	<30 arcmin
Surface quality	20-10 S-D after coating
Wavefront distortion	<λ/8 @ 632.8 nm
Parallelism error	<20 arcsec
Perpendicularity	<5 arcmin
Protective chamfers	<0.1 mm x 45°
Material optical damage threshold	>1 GW/cm ² for 10 ns pulses @ 1064 nm