

α -BBO

Introduction

α -BBO (α -BaB₂O₄) is a negative uniaxial crystal which has large birefringence over a broad transparent range of 190nm to 3500nm. α -BBO is an excellent crystal especially in UV and high power applications. The physical, chemical, thermal and optical properties of α -BBO crystal are similar to those of β -BBO. However, the nonlinear optical properties of α -BBO crystal are nonexistent due to the centric symmetry with its crystal structure. α -BBO crystal is not recommended for NLO processes.

Advantages of α -BBO

- High UV transmittance;
- Large birefringence;
- High damage threshold;
- Stable physical and mechanical properties.

Table1. Basic Properties of α -BBO

Transparency Range:	190-3500nm
Density:	3.85g/cm ³
Hygroscopic Susceptibility :	Low
Hardness (Mohs) :	4.5
Thermal Expansion Coefficients (/°C):	-9.3x10 ⁻⁶ (C) -9.5x10 ⁻⁶ (A)
Damage Threshold:	1GW
Refractive Indices:	No=1.6776, Ne=1.5534, 532nm No=1.6579, Ne=1.5379, 1064nm
Sellmeier Equation (λ in μ m) :	$n_o^2=2.7471+0.01878/(\lambda^2-0.01822)-0.01354\lambda^2$ $n_e^2=2.37153+0.01224/(\lambda^2-0.01667)-0.01516\lambda^2$

Table2. Specifications of α -BBO

Size:	1mm-40mm
Surface Quality:	10/5
Optical Axis Orientation:	6 arc min
Parallelism :	< 10 arc sec
Flatness:	$\lambda/4@633$ nm
Clear Aperture:	>90%
Coating:	AR-coating
Mount :	Upon Customer's Specification

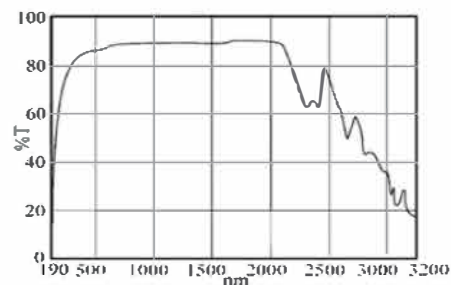


Figure1. Transparency Curve

公司简介 INTRODUCTION



CASTECH INC.

(CASTECH) was founded by Fujian Institute of Research on the Structure of Matter, Chinese Academy of Science in 1988. Thanks to long term interactive partnership with the leaders in laser system manufacturing industry and ongoing efforts of our employees, we have established the largest mass production lines in the world for LBO, BBO, Nd:YVO₄ and TGG crystals, and implemented a complete quality control system for our products.

CASTECH is now a worldwide leading supplier of nonlinear optical crystals, laser crystals, precision optics, and a variety of laser components. In CASTECH, there are Flux/Czochralski/Water Solution/Bridgman Crystal Growth production lines, Crystal Orientation and Dicing workshop, Optical Polishing workshop and Optical Coating workshop with IBS, IAD, MS and EB coating technique. Our commitments are backed by our huge manufacturing capacity.

CASTECH's quality system is IATF 16949:2016 and ISO 9001:2015 certified. We have established a complete system for outgoing parts inspection. Our optical testing equipments include Zygo Interferometers, Agilent Cary 7000, Perkin-Elmer Lambda 950, Nikon Microscope, Photo-Thermal Common-Path Interferometers, Zygo Newview 8300, Taylor Hobson LupoSan 260, Extinction Ratio Measurement and Ellipsometers. These equipments along with many others, ensure that we comply with all specifications for our products.

Today, over 60% of CASTECH's products are exported to USA, Japan, Europe and other Asia Market. We have established a global sales network. We have set up our agencies and distributors in the main industrial countries and districts.

Our mission is to deliver the best products and solutions to our customers in photonics industry, and help them to realize their full potential in business. Here at CASTECH, we value comity, integrity, honesty, and innovation.