LBO

Lithium triborate (LiB3O5 or LBO) is an excellent nonlinear optical crystal. It has widely recognized for these features:

Wide transparency range (210 nm – 2300 nm)
Moderately nonlinear coupling
High damage threshold
Good chemical and mechanical properties
For type I SHG of 1000 nm – 1200 nm possibility of non critical phase matching
Free of gray track effect therefore very useful in green lasers
LBO has non-critical phase matching conditions (NCFM) for Type I SHG at 1000-1300nm. In this case, LBO is free of walk-off limitations and, therefore, long LBO crystals can be used. LBO crystals are free of the grey track effect and as a result, are very useful in high power green lasers.

Specifications

Dimensional Tolerance	(W±0.1mm) x (H±0.1mm) x (L+0.2/-0.1 mm) L>2mm
	(W±0.1mm) x (H±0.1mm) x (L±0.1 mm) L<2mm
Absorption	<0.002%@1064nm, <0.01%@532nm
Cutting Angle Tolerance	Dq< ±0.2°, Df< ±0.2°
Wavefront Distortion	<λ/8 @632.8 nm
Chamfer	≤ 0.15 mm x 45°
Perpendicularity	< 5 arc min
Parallelism	< 20 arc sec
Flatness	<λ/10 @633 nm
Scratch/Dig	10/5 per MIL-PRF-13830B
Clear Aperture	> Central 90%
Antireflection Coating	R<0.2%@1064nm,R<0.5%@532nm,R<3%@355nm

Application: SHG@1064nm,

Part No	W	H	L	θ	φ	Coating
LBO-3312S1	3	3	12	90	11.4	AR/AR1064&532nm
LBO-3315S1	3	3	15	90	11.4	AR/AR1064&532nm
LBO-3320S1	3	3	20	90	11.4	AR/AR1064&532nm
LBO-4412S1	4	4	12	90	11.4	AR/AR1064&532nm
LBO-4415S1	4	4	15	90	11.4	AR/AR1064&532nm
LBO-4420S1	4	4	20	90	11.4	AR/AR1064&532nm
LBO-5512S1	5	5	12	90	11.4	AR/AR1064&532nm
LBO-5515S1	5	5	15	90	11.4	AR/AR1064&532nm
LBO-5520S1	5	5	20	90	11.4	AR/AR1064&532nm
LBO-3312S2	3	3	12	20.9	90	AR/AR1064&532nm
LBO-3315S2	3	3	15	20.9	90	AR/AR1064&532nm
LBO-3320S2	3	3	20	20.9	90	AR/AR1064&532nm
LBO-4412S2	4	4	12	20.9	90	AR/AR1064&532nm
LBO-4415S2	4	4	15	20.9	90	AR/AR1064&532nm
LBO-4420S2	4	4	20	20.9	90	AR/AR1064&532nm
LBO-5512S2	5	5	12	20.9	90	AR/AR1064&532nm
LBO-5515S2	5	5	15	20.9	90	AR/AR1064&532nm
LBO-5520S2	5	5	20	20.9	90	AR/AR1064&532nm

Application: THG@1064 nm,

Part No	W	H	L	θ	φ	Coating
LBO-3312T1	3	3	12	90	37.2	AR/AR1064&532&355nm
LBO-3315T1	3	3	15	90	37.2	AR/AR1064&532&355nm
LBO-3320T1	3	3	20	90	37.2	AR/AR1064&532&355nm

LBO-4412T1	4	4	12	90	37.2	AR/AR1064&532&355nm
LBO-4415T1	4	4	15	90	37.2	AR/AR1064&532&355nm
LBO-4420T1	4	4	20	90	37.2	AR/AR1064&532&355nm
LBO-5512T1	5	5	12	90	37.2	AR/AR1064&532&355nm
LBO-5515T1	5	5	15	90	37.2	AR/AR1064&532&355nm
LBO-5520T1	5	5	20	90	37.2	AR/AR1064&532&355nm
LBO-3312T2	3	3	12	42.9	90	AR/AR1064&532&355nm
LBO-3315T2	3	3	15	42.9	90	AR/AR1064&532&355nm
LBO-3320T2	3	3	20	42.9	90	AR/AR1064&532&355nm
LBO-4412T2	4	4	12	42.9	90	AR/AR1064&532&355nm
LBO-4415T2	4	4	15	42.9	90	AR/AR1064&532&355nm
LBO-4420T2	4	4	20	42.9	90	AR/AR1064&532&355nm
LBO-5512T2	5	5	12	42.9	90	AR/AR1064&532&355nm
LBO-5515T2	5	5	15	42.9	90	AR/AR1064&532&355nm
LBO-5520T2	5	5	20	42.9	90	AR/AR1064&532&355nm

Lasertec was estabilished on 2004,based in China, is a recognized leader in laser components and high-performance optical solutions. Combining adequate Laser material and Laser Optics supply, extensive fabricating experience, and the standardized service, Lasertec specializes in producing high-precision Laser optical components for the Laser, Medical, Life Sciences, Defense & security, Semiconductor, and Industrial OEM markets.

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