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CLBO

(Caesium lithium borate)

CLBO (Caesium Lithium Borate $CsLiB_6O_{10}$) a nonlinear crystal ideal for high harmonic frequency conversion. It features a large transparency is window extending into the deep ultraviolet (DUV), enabling frequency conversion below 200 nm.

Key Applications

- 7th and 8th harmonics of 1550 nm
- 4th and 5th harmonics of Nd:YAG
- High-power DUV applications

Advantages

- Wide transmission range: 180-2750 nm
- Small walk-off
- Type I SHG to 237 nm
- Sum frequency generation (SFG) below 200 nm
- High bulk laser damage threshold in the DUV
- Low absorption

CLBO is the optimal choice for high-power DUV applications, offering superior performance in generating ultraviolet wavelengths through harmonic conversion of infrared lasers.

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Typical Specifications for CLBO

Aperture	Up to 15x15 mm^2
Length	Up to 20 mm
Flatness	λ/8 @ 633 nm
Perpendicularity	<10 arc min.
Parallelism	20 arc sec.
Scratch/Dig	Up to 5/1
Wavefront Distortion	λ/8 @ 633nm
AR Coating	Uncoated
Absorption Coefficient	150ppm/cm @ 1064 nm
Laser Induced Damage Threshold	29 GW cm^2 @ 1064 nm* 6.4 GW/cm^2 @ 266 nm*

*https://iopscience.iop.org/article/10.1143/JJAP.38.L129/pdf

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