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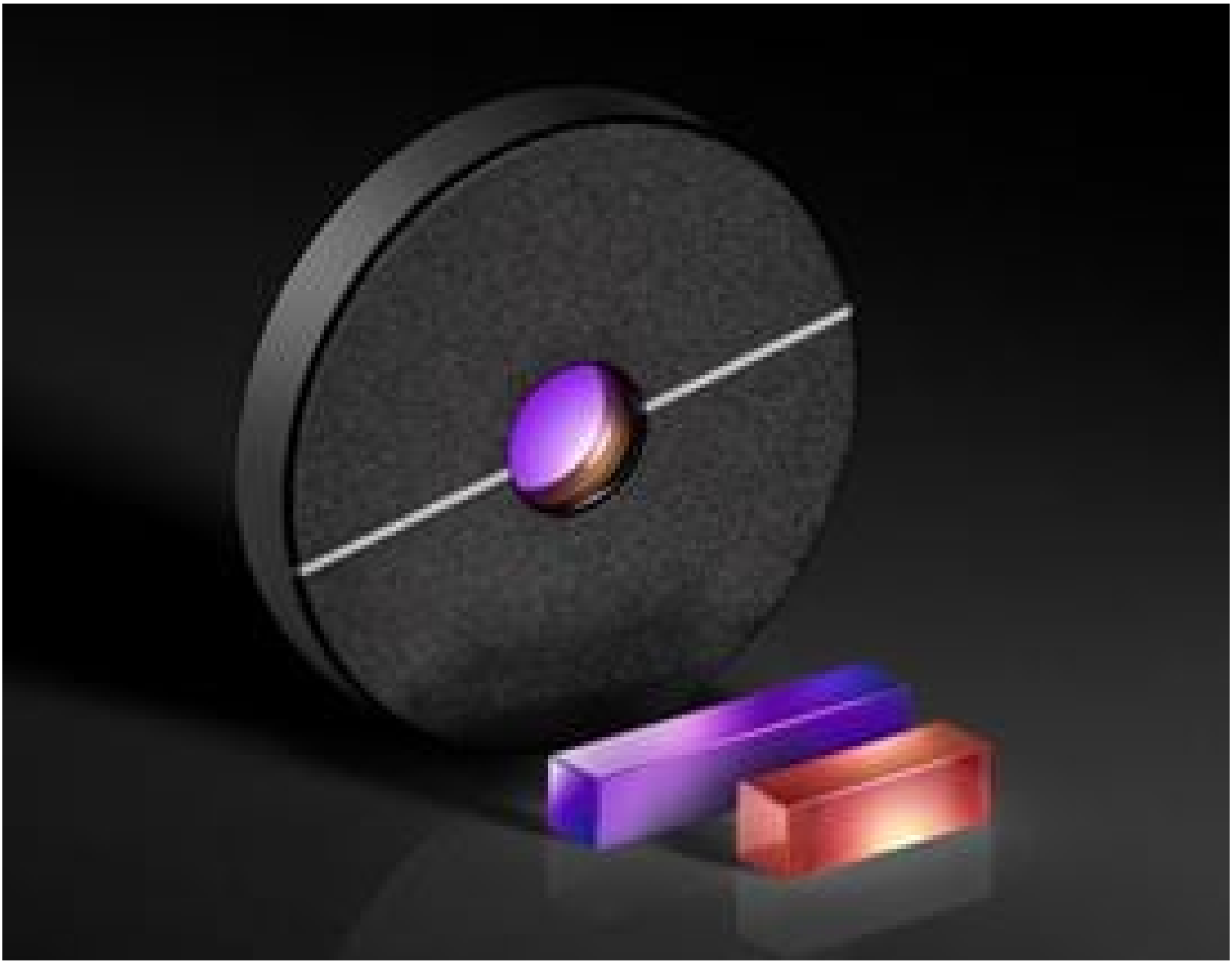
12 x 12 x 5mm, 532nm SHG, Type I KDP Nonlinear Crystal



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General

Type:
Nonlinear Crystal

Typical Applications:
SHG @ 532 nm, Type I

Crystal Type:
KDP

Protective Chamfer:
<0.1 mm x 45°

Physical & Mechanical Properties

Dimensions (mm):
12.0 x 12.0 +0.0/-0.1

Thickness (mm):
5.00 +0.0/-0.1

Clear Aperture CA (mm):
>10.8

Parallelism (arcsec):
<10

Perpendicularity (arcmin):
<5

Optical Properties

Surface Quality:
20-10

Coating:
AR Coating

Design Wavelength DWL (nm):
532

Surface Flatness (P-V):
λ/8 @ 633nm

Coating Specification:
S1: 266 & 532nm AR Coating
S2: 266 & 532nm AR Coating

Damage Threshold, By Design:
5 J/cm^2 @532nm, 10ns, 10Hz
2.5 J/cm^2 @266nm, 10ns, 10Hz

Damage Threshold, Pulsed:
Not Specified

Orientation Θ/Φ (°):
76.5/45

Threading & Mounting

Mount:
Unmounted

Regulatory Compliance

RoHS 2015:
Compliant

Certificate of Conformance:
View

Reach 247:
Compliant

Product Details

- BBO Crystals for Frequency Conversion of 800nm and 1030nm Lasers
- LBO Crystals for Frequency Conversion of 1030nm and 1064nm Lasers
- High Damage Thresholds Up to 10 J/cm^2 @ 1064nm, 10ns, 10Hz
- Broad Transparency Range from the UV to the IR

Nonlinear Crystals of either β-barium borate (BBO) or lithium triborate (LBO) are used for frequency conversion of laser sources. BBO crystals feature thicknesses from 0.2mm to 0.5mm to minimize group velocity mismatch and are ideal for frequency doubling or tripling of Ti:Sapphire and Yb:doped laser pulses. The critical and noncritical phase matching LBO crystals are ideal for second or third harmonic generation of Nd:YAG and Yb:doped lasers. Nonlinear Crystals with 20-10 surface quality and λ/10 (LBO) or λ/8 (BBO) surface flatness provide the broad transparency range and large nonlinear coefficient needed for the harmonic generation of fundamental laser frequencies. Each crystal features a protective anti-reflection (AR) coating that minimizes reflection and limits fogging from ambient conditions.

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