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Laser Crystal Manufactuer in China

Offer Nd:YLF Laser Crystal, Laser Crystal, NLO Crystal, Birefringent Crystal, Window Crystal

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Diffusion Bonded Crystal

Laser Crystal

Nd:YAG Laser Crystal

Cr4+:YAG Laser Crystal Er:YAG Laser Crystal Nd:Ce:YAG Laser Crystal Yb:YAG Laser Crystal

Nd:YLF Laser Crystal

Nd:YVO4 Laser Crystal

Optical Windows

BK7 Standard Windows

BK7 High Precision Windows Fused Silica Standard Windows

Fused Silica High Precision

Windows

Coating Film

BK7 Plano-Convex Cylindrical

Lens

Lens

BK7 Plano-Convex Lens

Fused Silica Plano-Convex Lens

BK7 Double Convex Lens

Fused Silica Double Convex

Lens

BK7 Plano-Concave Lenses Fused Silica Plano-Concave

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BK7 Double Concave Lenses

Fused Silica Double Concave Lens

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BK7 Plano-Convex Cylindrical

Lens

Optical Mirror

BK7 Standard Substrate

BK7 High Precision Substrate

Fused Silica Standard Substrate

Fused Silica High Precision

Beam Splitter Plate

Nd: YAG Laser Beam Combiner

Scanning Mirror

Coating Film

BK7 Plano-Convex Cylindrical



Nd:YLF Laser Crystal

Gallery

Nd:YLF

Exhibition

Nd:YLF is grown utilizing the modified Czochralsky technique. The use of high quality starting materials for crystal growth, whole boule interferometry, and precise measurement of bulk losses using transmission spectroscopy assures that each crystal will perform to customer specifications.

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Trade Offer

Advantages:

- 1. High power, low beam divergence, efficient single mode operation
- 2. High average power Q-switching at a moderate repetition rate
- 3. Linear polarized resonators for Q-switching and frequency doubling
- 4. Potential uniform mode for large diameter rods or slabs
- 5. Stimulated emission cross section is favorable for low CW threshold
- 6. Thermal lensing lower than that of YAG
- 7. 1053nm output of Nd:YLF matches gain curves of Nd:Glass and performs well as an oscillator and pre-amplifier for this host

Specifications:

Dopant Concentration 0.4~1.5 atm % Orientation a-cut or c-cut within 2° Flatness < λ/10 @ 632.8nm

Parallism ≤10 " Perpendicularity ≤5 '

Surface Quality 10/5 (MIL-O-13830A)

Size Diameter: 2~10mm, Length: 10~120mm Upon request of customer Diameter +0.0/-0.03mm, Length ±0.5mm Chamfer: < 0.1 mm @ 45° **Dimensional Tolerances**

AR-Coating Reflectivity ≤ 0.2% (@1047/1053nm)

Main properties of Nd:YLF crystal:

 $LiY_{1.0-x}Nd_xF_4$ Chemical Formaulay

3.99 Density, g/cm³ Mohs hardness 4~5

Lattice constant, A a = 5.26, c = 10.94 $n_o = 1.448$; $n_e = 1.47$ Refractive index, at 1.053 µm

Thermal conductivity, W x cm⁻¹ x °K⁻¹ 0.06

Thermal expansion (a), 10⁻⁶ x °C⁻¹ 13 along a, 8 along c

 $\pi = 4.3 \times 10^{-6} \times {}^{\circ}\text{K}^{-1}$, $\sigma = 2.0 \times 10^{-6} \times {}^{\circ}\text{K}^{-1}$ Thermooptical factor (dn/dT), at 1.06 µm

Generated wavelength, µm $\pi = 1.047$, $\sigma = 1.053$ 1047nm, 1053nm Laser Wavelength

Fluorescence Lifetime 485µs

Emission Cross Section $1.8 \times 10^{-19} \text{cm2}(E \parallel C) @ 1047 \text{nm}$ $1.2 \times 10^{-19} \text{cm2}(E \perp C) @ 1053 \text{nm}$

Feedback Form



NLO Crystal

LBO Crystal

BBO Crystal

KTP Crystal

KDP, KD*P Crystal

LiNbO₃ / LN Crystal

Window Crystal

YAG Crystal

Sapphire Crystal

CaF₂ Crystal

MgF₂ Crystal

BaF₂ Crystal

LiF Crystal

Laser Rod Repolishing

Laser Safety Glasses

Optical Filter

Medical IPL Filter

Interference Filter

Light Pipe Homogenizing

Laser Beauty Supplies

Laser Handle

Laser Bonding Crystal





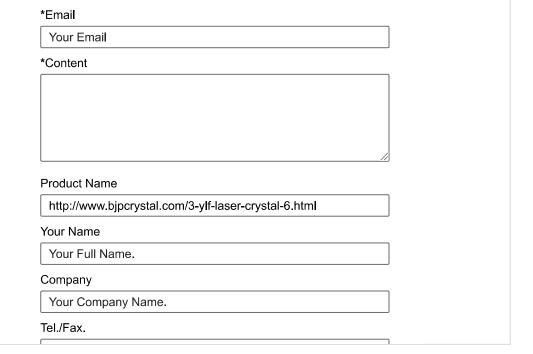




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Related Products



NLO Crystal

KTP crystal is the most commonly used for SHG(Frequency doubling) of Nd-doped laser for green/red output. It is widely used in both commercial and military lasers including laboratory and medical systems, range-finders, lidar, optical communication and industrial systems....

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