



## Laser Crystal Manufactuer in China

Offer Nd:YVO<sub>4</sub> Laser Crystal, Laser Crystal, NLO Crystal, Birefringent Crystal, Window Crystal To You.

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## Nd:YVO<sub>4</sub> Laser Crystal

### Nd:YVO<sub>4</sub>

Nd:YVO<sub>4</sub> crystal is one of the most excellent laser host materials, it is suitable for diode laser-pumped solid state laser. Compactly designed Nd<sup>3+</sup>:YVO<sub>4</sub> lasers with green, red and blue light output are really perfect means for material processing. Nd<sup>3+</sup>:YVO<sub>4</sub> diode pumped lasers have: wide absorption bandwidth, low lasing threshold, high slope efficiency, large luminescent cross-section, linearly polarized emission and single-mode output.

### Diffusion Bonded Crystal

#### [Laser Crystal](#)

- Nd:YAG Laser Crystal
- Cr<sup>4+</sup>:YAG Laser Crystal
- Er:YAG Laser Crystal
- Nd:Ce:YAG Laser Crystal
- Yb:YAG Laser Crystal
- Nd:YLF Laser Crystal
- [Nd:YVO<sub>4</sub> 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 Lens
- BK7 Double Concave Lenses
- Fused Silica Double Concave Lens
- Coating Film
- BK7 Plano-Convex Cylindrical Lens

### Optical Mirror

- BK7 Standard Substrate
- BK7 High Precision Substrate
- Fused Silica Standard Substrate
- Fused Silica High Precision Substrate
- Beam Splitter Plate
- Nd: YAG Laser Beam Combiner
- Scanning Mirror
- Coating Film
- BK7 Plano-Convex Cylindrical Lens

### Advantages:

1. Lower lasing threshold and higher slope efficiency
2. Low dependency on pumping wavelength and tend to single mode output
3. Large stimulated emission cross-section at lasing wavelength
4. High absorption over a wide pumping wavelength bandwidth
5. Optically uniaxial and large birefringence emit strongly-polarized laser

### Specifications:

Dopant	0.1% ~ 3%
Orientation	A-CUT +/-0.5°
Size & Tolerance	W(+/-0.1)xH(+/-0.1)xL(+0.5/-0.1)mm
Surface quality	10/5
Perpendicularity	≤5'
Parallelism	≤10"
Bevel	<0,2mmx45°
Flatness	λ/10@633nm
Chips	<0,1mm
TWD	λ/6@633nm
CA	≥95%
Coatings	C1--- AR@1064(R<0.2%)
	C2--- AR@1064(R<0.2%)&532(R<0.5%)
	C3--- AR@1064(R<0.2%)&808(R<3%)
	C4---AR@1064(R<0.2%)&532(R<0.5%)&808(R<3%)
	C5--- HR@1064(R>99.8%)&HT@808(T>95%)
	C6---HR@1064(R>99.8%)&532(R>99.5%)&HT@808(T>95%)
Damage Threshold	700MW/cm <sup>2</sup> 10ns 1Hz at 1064nm

### Main properties of Nd:YVO<sub>4</sub> crystal:

Space group	D4h-I4/amd
Lattice Parameters	a=b=7.12Å, c=6.29Å
Density	4.22 g/cm <sup>3</sup>
Mohs Hardness	Glass-like, 4-5
Thermal Expansion Coefficient	α <sub>a</sub> =4.43x10-6/K, α <sub>c</sub> =11.37x10-6/K
Thermal Conductivity Coefficient	c: 5.23 W/m/K; ⊥ c: 5.10 W/m/K
Lasing Wavelengths	914nm, 1064 nm, 1342 nm
Thermal Optical Coefficient	dn <sub>o</sub> /dT=8.5x10-6/K, dn <sub>e</sub> /dT=3.0x10-6/K
Stimulated Emission Cross-Section	25.0x10-19 cm <sup>2</sup> , @1064 nm
Fluorescent Lifetime	90 μ s @ 808 nm
Absorption Coefficient	31.4 cm-1 @ 808 nm
Absorption Length	0.32 mm @ 808 nm
Gain Bandwidth	0.96 nm (257 GHz) @ 1064 nm

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## NLO Crystal

LBO Crystal  
BBO Crystal  
KTP Crystal  
KDP, KD\*P Crystal  
LiNbO<sub>3</sub> / LN Crystal

## Window Crystal

YAG Crystal  
Sapphire Crystal  
CaF<sub>2</sub> Crystal  
MgF<sub>2</sub> Crystal  
BaF<sub>2</sub> 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



Diode Pumped Optical to Optical Efficiency  $\pi$  > 60%  
polarization;

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#### [Nd:YLF Laser Crystal](#)

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...