



Laser Crystal Manufactuer in China

Offer Yb:YAG Laser Crystal, Laser Crystal, NLO Crystal, Birefringent Crystal, Window Crystal To You.

Add To Favotites Set It As My Home

English Deutsch Русский

Home » Products » Laser Crystal » Yb:YAG Laser Crystal

Video

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 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. High optical quality
- 2. Very high slope efficiency
- 3. Very low fractional heating, less than11%
- 4. No excited-state absorption or up-conversion
- 5. Broad absorption bands, about 8nm@940nm
- 6. High thermal conductivity and large mechanical strength
- 7. Conveniently pumped by reliable InGaAs diodes at 940nm(or 970nm)

Specifications

Dopant concentration	Yb:0.3~15at%
Orientation	[100]or[111]within 5°
Wavefront Distortion	≤0.125λ/inch
Extinction	≥28dB
Rod Sizes	Diameter: 2~20mm, length: 5~150mm Upon request of customer
Dimensional Tolerances	Diameter: +0.00/-0.05mm, length:±0.5mm
Barrel Finish	Ground Finish with 400# grit or polished
Parallelism	≤10"
Perpendicularity	≤5'
Flatness	λ/10@632.8nm
Surface Quality	10-5(MIL-PRF-13120-10)
Chamfer	0.15±0.05mm
AR Coating Reflectivity	≤0.25%(@1030nm)
Damage Threshold	500MW/cm ² 10ns 1Hz at 1064nm

Main Properties of Yb:YAG crystal:

Chemical Formula	Yb ³⁺ :Y ₃ Al ₅ O ₁₂
Laser Wavelength	1030nm
Fluorescence Lifetime	1.2 ms
Index of Refraction	1.82
Loss Coefficient	0.003 cm-1
Crystal Structure	Cubic
Lattice Parameters	12.01 Å
Melting Point	1970°C
Moh Hardness	8.5
Density	4.56±0.04g/cm3
Specific Heat (0-20)	0.59J/g.cm3
Thermal Expansion Coefficient	[111]Direction:7.8×10-6/°C(0~250°C)
Thermal Conductivity	14W/m/K(@20°C) , 10.5W/m/K(@100°C)

Yb:YAG Laser Crystal

Yb:YAG

Yb:YAG crystal is one of the most promising laser-active materials and more suitable for diode-pumping than the traditional Nd-doped systems. It can be pumped at 0.94 μm and generate 1.03 μm laser output. Yb:YAG crystal at 1030nm is a good substitute for a Nd:YAG crystal at 1064nm and its second harmonic at 515nm may replace Ar-ion laser(with a large volume), which emits at 514nm. Yb:YAG crystal is expected to replace Nd:YAG crystal for high power diode-pumped lasers and other potential applications.

+ Consulting Products Information

Format: Rods, Discs and Slabs

Rod sizes: Diameter: 2- 10mm, Length: 30 - 150mm

Disc sizes: Diameter: 2 - 15mm, Thickness: >= 1mm

Slab sizes: Length: 60 - 150mm, Width: 6 - 15mm, Thickness: 3 - 4mm

Ends: Plane, Brewster, Concave and Convex

Sides: Ground, Polished and Grooved



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



Feedback Form

*Email

Your Email

*Content

Product Name

http://www.bjpcrystal.com/3-yb-laser-crystal-8.html

Your Name

Your Full Name.

Company

Your Company Name.

Tel./Fax.

Related Products



Nd:YAG Laser Crystal

Nd:YAG crystal is the most early and mature laser material adopted by R&D, medical, industrial and military customers. It is the ubiquitous presence for near-infrared solid-state lasers and their frequency-doubler, tripler, and higher order multiplier...

Home » Products » Laser Crystal » Yb:YAG Laser Crystal

Top

Yb:YAG Laser Crystal | YAG Laser Crystal | 3D Laser Crystal | Custom Laser Crystal | Laser Crystal Light | Laser crystal Gifts | Window crystal | Organic NLO Crystals| Review

ETW CLOUD

VRC

RSS

SITEMAP

LEGAL