



DeLn Optics

Optical Material

Optical Coating

Optical Components

Waveplates

Crystals

Micro Optics

Stock

HOME CRYSTALS LASER CRYSTALS



Online Inquiry

Contact: *

Company:

Subject: Er:YAG

Tel:

E-mail: *

Content: *

Code: 8266

*(marked *should be filled)

Submit

ER:YAG

Er:YAG is an excellent laser crystal which lases at 2.94 μm , This wavelength is the most readily absorbed into water and hydroxyapatite of all existing wavelengths and is considered a highly surface cutting laser.

It has wide applications in medical applications, such as dental (hard tissues), orthopedics, etc.

Advantages

High slope efficiency

Operate well at room temperature

Operate in a relatively eye-safe wavelength range

Properties

Crystal Structure	Cubic
Lattice Parameters	12.01Å
Orientation	<100> within 5°
Melting Point	1970°C
Moh Hardness	8.5
Density	4.56g/cm ³
Specific Heat (0-20)	0.59J/g.cm ³
Thermal Expansion Coefficient	[100]Direction:8.2×10 ⁻⁶ /°C(0~250°C)

Laser Transition	⁴ I _{11/2} to ⁴ I _{13/2}
Laser Wavelength	2940nm
Photon Energy	6.75×10 ⁻²⁰ J(@2940nm)
Emission Cross Section	3×10 ⁻²⁰ cm ²
Index of Refraction	1.79 @2940nm
Pump Bands	600~800 nm

Specifications

Dopant concentration	Er: ~50 at%
Diameter Tolerance	+0/-0.05mm
Length Tolerance	+0.5/-0mm
Surface Flatness	< λ /10@632.8nm
Wavefront Distortion	< λ /8@632.8nm
Surface Quality	10/5 Scratch/Dig
Clear Aperture	>95%
Parallelism	<10 arc seconds
Perpendicularity	<5 arc minutes
Chamfer	0.1mm@45°
Extinction Ratio	>25dB
AR Coating	R \leq 0.25% (@2940nm)

INFORMATION

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WARRANTY

All products are guaranteed to be in specifications in material and workmanship for a period of 12 months after shipment.

We do not assume liability for installation, labor or consequential damages.

This warranty is not suitable for failure of the products due to misuse, abuse, accident, or neglect.

CONTACTS

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