Nd:YCOB

DESCRIPTION

CRYLINK's Nd:YCOB crystal products, also known as Nd:YCa4O(BO3)3 crystal. It is a kind of laser crystal product with excellent comprehensive performance. It is widely used in the fields of frequency doubling laser, ranging and LD pumping. The product has uniform melting behavior and self-doubling laser action characteristics. Can be used in solid state laser, Nd:YCOB laser, continuous wave self-frequency doubling laser, diode pump ranging system products.

FEATURES

- Consistent melting behavior
- Has the characteristics of self-multiplier laser action

APPLICATIONS

- Solid lasers
- Nd:YCOB laser
- Cw self-octave laser
- Diode pumping rangefinder system

www.laser-crylink.com
sales@crylink.com
+86-21-66566068
Building 7, No.718 Baoqi Road, Baoshan District, Shanghai, China

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BASIC PARAMETERS

Chemical formula	Nd:YCa4O(BO3)3
Crystal system	Monoclinic (m), biaxial
Lattice constant	a = 0.8076Å, b=1.6020 Å, c = 0.3527Å, β=101.23°
Melting point	1510℃
Density	3.31 g/cm3
Mohs hardness	6.0-6.5 (mohs)
Growth method	Czochralski growth
Refractive index@1064nm	nx=1.6844, ny=1.7152, nz=1.7256
Fluorescent lifetime	105μm
Emission cross-section	0.45×10-19 cm2
Absorption peak	796, 812nm
Absorption cross-section at pump wavelength	2.3×10-20 cm2
Absorption cross-section at SFD wavelength	0.40×10-20 cm2
Transmission range	1000-2600nm
Damage threshold	>1 Gw/cm2@532 nm, 6 ns
SHG deff @1.06 μm (I type)	1.1 pm/V

THE PARAMETERS OF SELLMEIER EQUATION

Sellmeier equation		n2(λ)=A+B/(λ2-C)-D·λ2	
Parameter	nx	ny	nz
A	2.78232	2.88739	2.92685
B	0.0112	0.01223	0.01474
C	0.0899	0.08855	0.07466
D	7.2561×10-5	6.1142×10-5	5.2148×10-5

STANDARD SPECIFICATIONS

Direction tolerance	< 0.5°
Thickness/diameter tolerance	±0.01 mm
Surface flatness	<λ/8 @632nm
Wavefront distortion	<λ/4 @632nm
Surface quality	44474
Parallel degrees	30″
Perpendicularity	15′
Clear aperture	>90%
Chamfer	<0.2×45°

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SPECTROGRAM