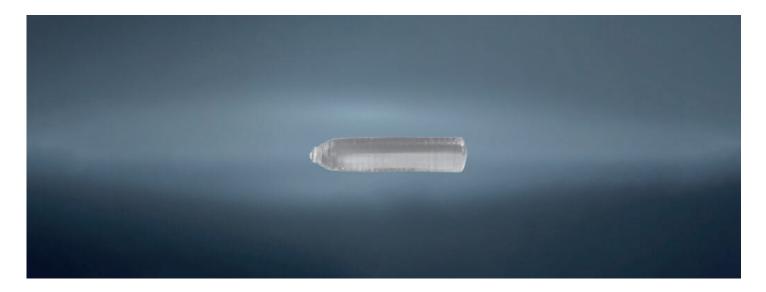


Nd:YCOB



DESCRIPTION

CRYLINK's Nd:YCOB crystal products, also known as Nd:YCa $_4$ O(BO $_3$) $_3$ 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 rangeInder system

PARAMETERS

PARAMETERS OF THE SELLMEIER EQUATION

Sellmeier equation	$n^2(\lambda) = A + B/(\lambda^2 - C) - D \cdot \lambda^2$		
Parameter	n _x	n _y	n_z
А	2.78232	2.88739	2.92685
В	0.0112	0.01223	0.01474
С	0.0899	0.08855	0.07466
D	7.2561×10 ⁻⁵	6.1142×10 ⁻⁵	5.2148×10 ⁻⁵



Nd:YCOB

STANDARD

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°	

BASIC PARAMETERS

Chemical formula	Nd:YCa ₄ O(BO ₃) ₃	
Crystal system	Monoclinic (m), biaxial	
	a = 0.8076Å, b=1.6020 Å,	
Lattice constant —	c = 0.3527Å, β=101.23°	
Melting point	1510℃	
Density	3.31 g/cm ³	
Mohs hardness	6.0-6.5 (mohs)	
Growth method	Czochralski growth	
Refractive index@1064nm	n _x =1.6844, n _y =1.7152, n _z =1.7256	
Fluorescent lifetime	105μm	
Emission cross-section	0.45×10 ⁻¹⁹ cm ²	
Absorption peak	796, 812nm	
Absorption cross-section at pump wavelength	2.3×10 ⁻²⁰ cm ²	
Absorption cross-section at SFD wavelength	0.40×10 ⁻²⁰ cm ²	
Transmission range	1000-2600nm	
Damage threshold	>1 Gw/cm² @532 nm, 6 ns	
SHG deff @1.06 μm (I type)	1.1 pm/V	



Nd:YCOB

SPECTRA

