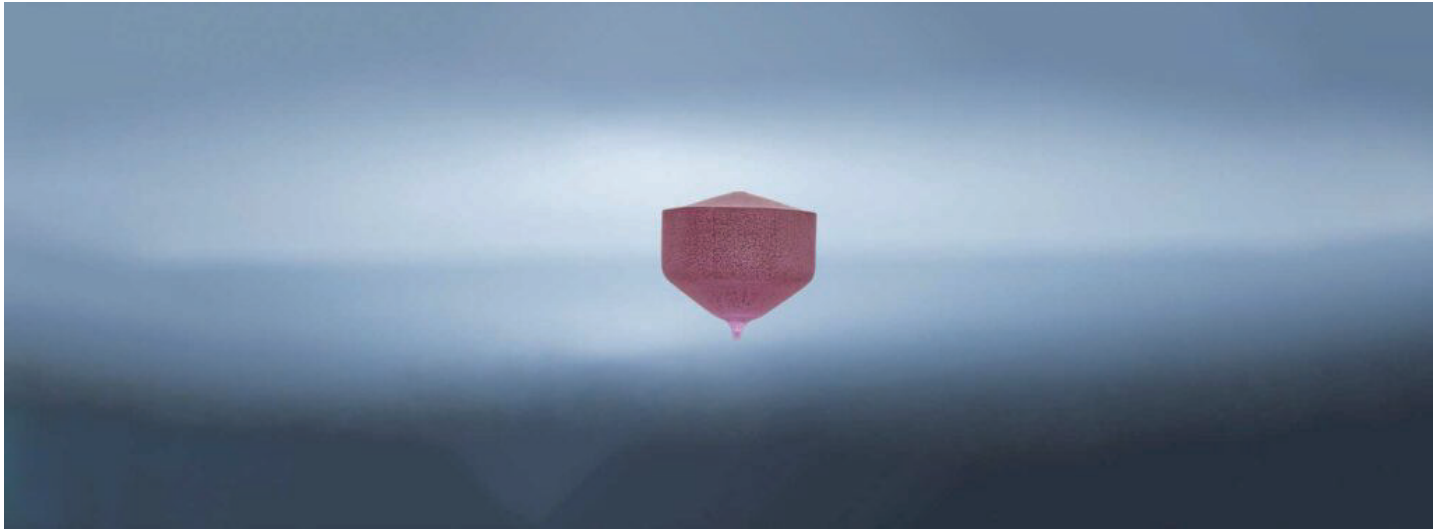


Nd:GGG



DESCRIPTION

CRYLINK's Nd:GGG crystal products, also known as Nd:Gd₃Ga₅O₁₂ crystal. It is a kind of laser crystal product with excellent comprehensive performance. It is widely used in LD pump and laser working material field. The product has the characteristics of large stimulated emission cross section, high thermal conductivity and long emission time. Can be used in flash, solid state heat capacity laser, high power LD pumped Nd:GGG laser products.

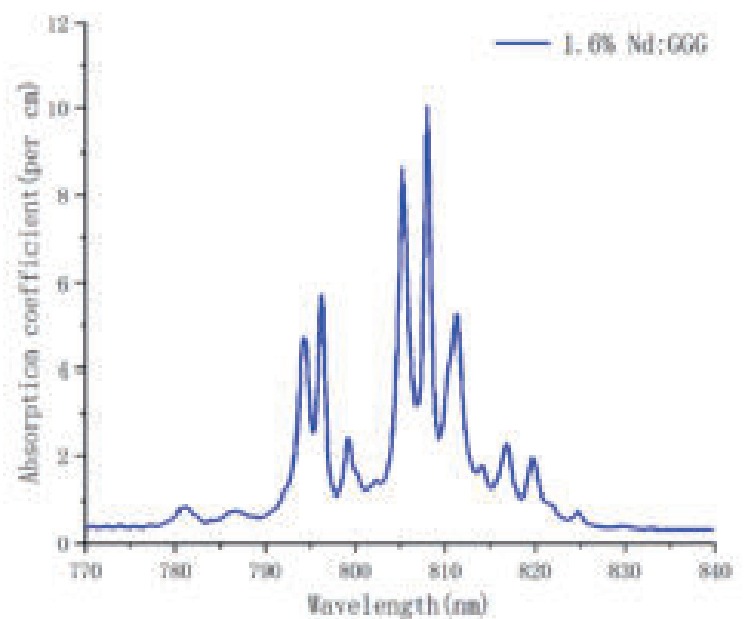
FEATURES

- High laser efficiency
- Low threshold
- High thermal conductivity
- High specific heat capacity

APPLICATIONS

- Solid-state heat capacity laser

SPECTRA



Nd:GGG

PARAMETERS

STANDARD

| | |
|-------------------------|---|
| Doping Concentration | 0.5~3at.% |
| Orientation | [111] within± 5° |
| Wavefront Distortion | ≤ 0.5λ/inch@632.8 nm (for the rod) |
| Extinction Ratio | ≥ 20dB @632.8 nm (for the rod) |
| Size | Diameter: 2~70mm, Length: 3~100mm |
| Dimensional Tolerance | Diameter: +0.00"/-0.002", Length: ± 0.02" |
| Barrel finish | Ground Finish with 400# Grit or polished |
| Parallelism | ≤ 10 arcsec (for the rod) |
| Flatness | ≤ λ/4@632.8nm (for the rod) |
| AR Coating Reflectivity | ≤0.25% @1060nm |

PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-------------------|------------------------------------|
| Crystal Structure | Cube |
| Lattice Constant | 12.383 Å |
| Mohs Hardness | 8 |
| dn/dT | 17×10 ⁻⁶ /K |
| Poisson Ratio | 0.28 |
| Melting Point | 1725°C |
| Density | 7.1 g/cm ³ |
| Thermal Expansion | 8×10 ⁻⁶ C ⁻¹ |

OPTICAL AND SPECTRAL PROPERTIES

| | |
|-----------------------|--|
| Laser Conversion | ⁴ F _{3/2} → ⁴ I _{11/2} |
| Laser wavelength | 1060nm |
| Fluorescence Lifetime | 240μs |
| Refractive Index | 1.94@1060nm |
| Diode Pump Belt | 808nm, 881nm |

