

Er: GGG



DESCRIPTION

CRYLINK erbium-doped GGG crystal products, also known as Er: GGG crystal. It is a kind of laser crystal product with excellent comprehensive performance. It is widely used in photoelectric countermeasure, laser radar and environmental monitoring. The product has the characteristics of high quantum efficiency, good high temperature resistance and high thermal conductivity. It can be used in microchip laser, mid-infrared OPO laser, radar, environmental monitoring instrument products.

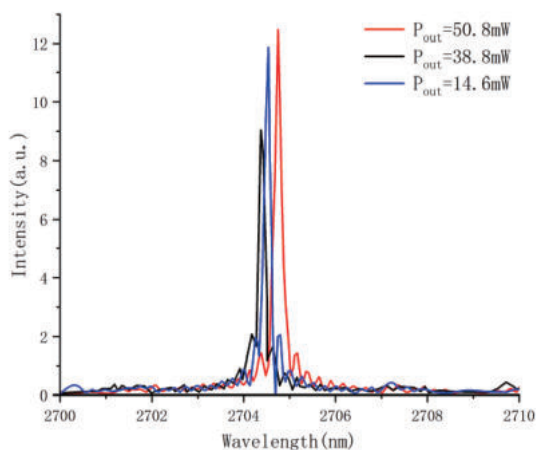
FEATURES

- The human eye is safe
- High quantum efficiency
- High thermal conductivity
- Durable mechanical stress
- High temperature resistance

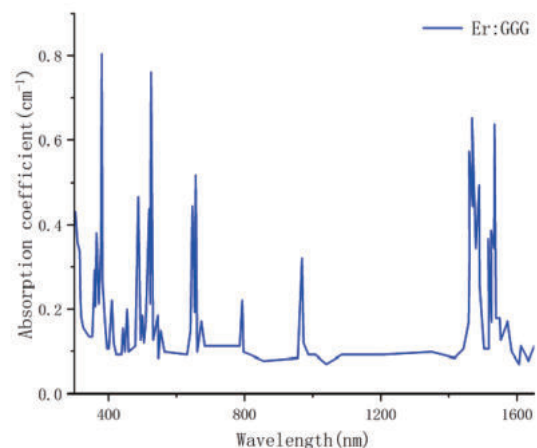
APPLICATIONS

- Lidar
- Microchip lasers
- Environmental monitoring
- Photoelectric confrontation
- Mid-infrared OPO laser pump source

SPECTRA



Er:GGG laser crystal spectrum



Er:GGG laser crystal absorption curve



Er: GGG

BASIC PARAMETERS

Chemical Formula	Er:Gd ₃ Ga ₅ O ₁₂
Crystal Structure	Cubic
Lattice Constant	12.38 Å
Crystal Growth	Czochralski
Pump Wavelength	968nm
Refractive Index	1.935@2.7μm
FWHM	0.42nm
Central Peak Wavelength	2704nm
Laser Wavelength	2821nm
Pumped Threshold	7mW
Conversion Efficiency	20.50%
Maximum Output Efficiency	155mW
Ion Density	7.81×10 ²¹ ions/cm ³
Absorption Cross Section	1.03×10 ⁻²⁰ cm ² @965nm
Emission Cross Section	7.24×10 ⁻¹⁹ cm ² @2.7μm
Er ³⁺ : ⁴ I _{11/2} Life	1.06ms
Er ³⁺ : ⁴ I _{13/2} Life	8.77ms

