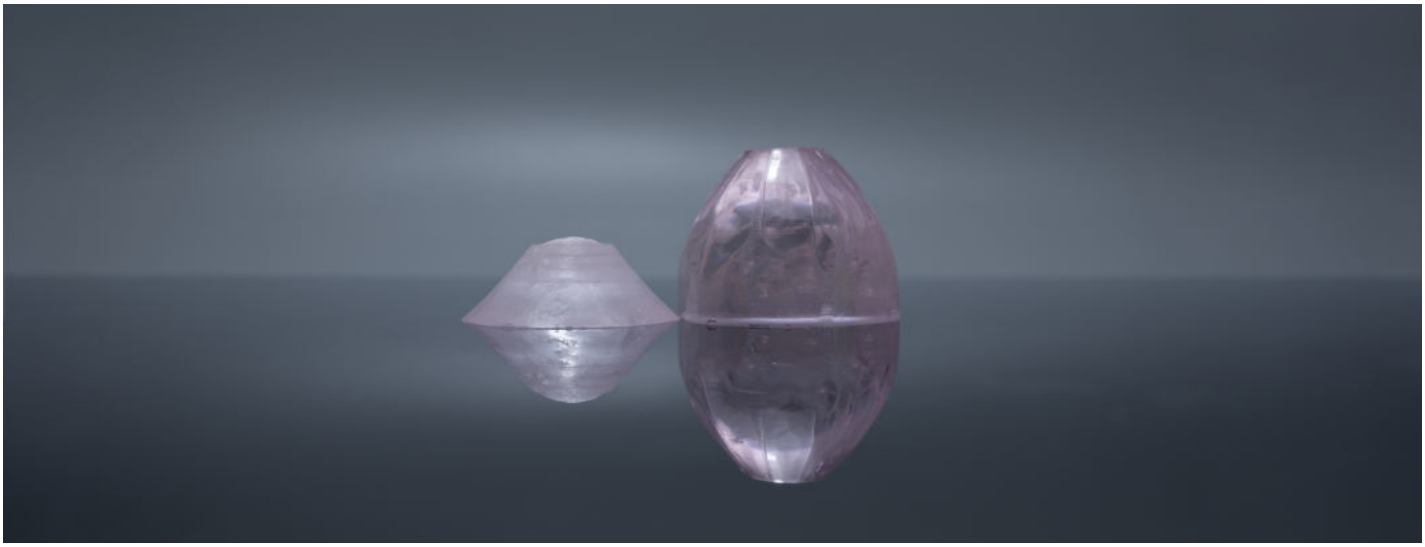
Er:GGG



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 lasersn
- Environmental monitoring
- Photoelectric confrontation
- Mid-infrared OPO laser pump source

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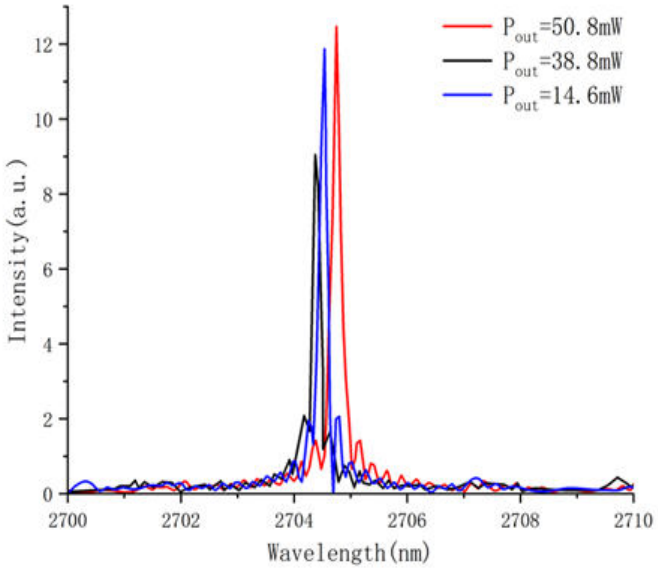
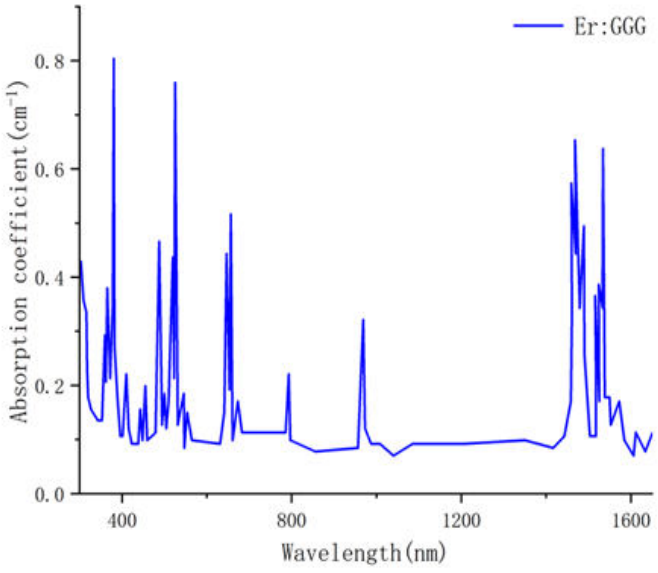
Er:GGG

PRODUCT PARAMETERS

Chemical formula	Er:$Gd_3Ga_5O_{12}$
Crystal structure	Cubic
Lattice parameters	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
Pump threshold	7mW
Conversion efficiency	0.205
Maximum output efficiency	155mW
Ion density	7.81×10^{21} ions/cm^3
Absorption cross-section	$1.03\times10^{-20}cm^2$ @965nm
Emission cross-section	$7.24\times10^{-19}cm^2$ @2.7μm
Er3+:4I11/2 lifetime	1.06ms
Er3+:4I13/2 lifetime	8.77ms

SPECTROGRAM





Spectra of Er:GGG microchip lasers with output power of 14.6, 38.8 and 50.8 mW and output coupler of 2%

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