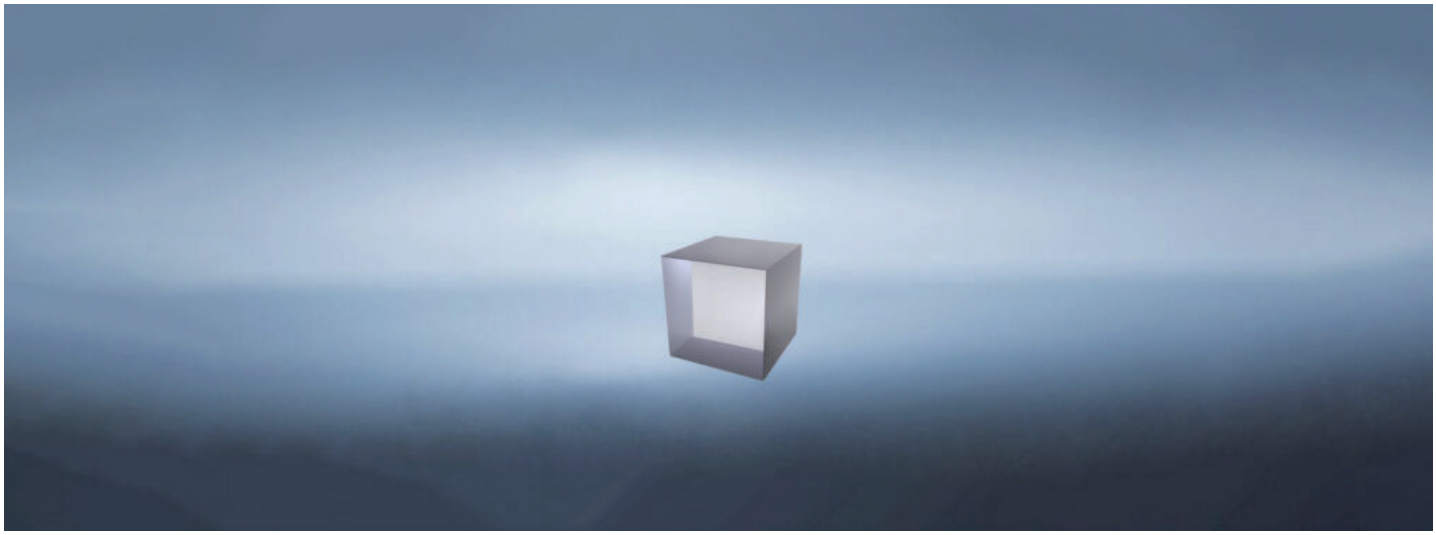
Ho:YLF



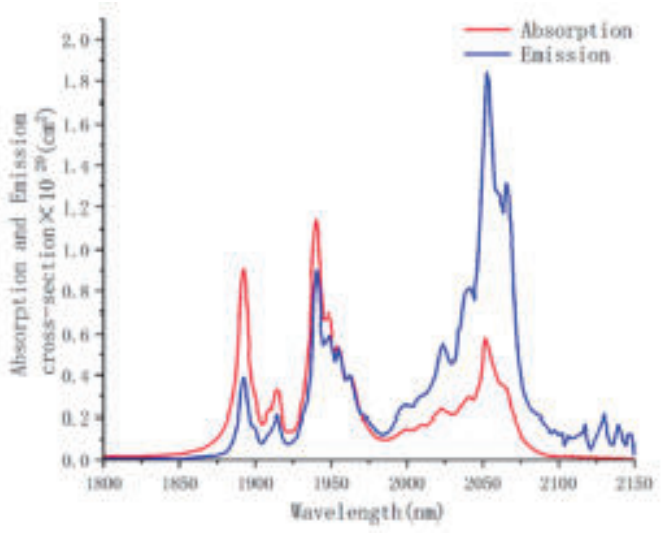
DESCRIPTION

CRYLINK's Ho: YLF crystal product, also known as holmium doped yttrium fluoride lithium crystal. It is a laser product with excellent comprehensive performance. It is widely used in industry, medical treatment and scientific research. The product has the characteristics of low nonlinear refractive index, low thermal optical constant value and long service life of $^5I_7$ energy level. Can be used in remote sensing, pollutant monitor solid laser products.

FEATURES

- High laser horizontal life
- High emission cross section
- Natural birefringent materials
- dn /dT value is low → weak thermal lens
- The absorption and emission interfaces have strong temperature dependence.

SPECTRA



APPLICATIONS

- 2000nm lasers are used for military applications
- 2000nm lasers are used for physical research
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www.crylink.com
sales@crylink.com
+86-21-66566068
Building 7, No.718 Baoqi Road, Baoshan District, Shanghai, China

Ho:YLF

PARAMETERS

MATERIAL AND SPECIFICATIONS

Orientation	a-cut
Parallelism error	<10 arcsec
Perpendicularity error	<10 arcmin
Clear aperture	>90%
Protective chamfers	<0,1 mm at 45′
Surface quality	10-5 S-D
Surface flatness	< /10@632,8 nm
Face dimensions tolerance	+0/-0,1 mm
Coatings	R<0,35%@1900-2100nm on both faces
LIDT	>10 J/cm^2 @2060 nm, 10 ns

PHYSICAL AND CHEMICAL PROPERTIES

Absorption peak wavelength	1940nm
Absorption Cross-section at Peak	1.2×10^{-20} cm^2
Absorption Bandwidth at Peak Wavelength	-18nm
Laser Wavelength	2060nm
Lifetime of $^5I_7$ Energy Level	10ms
Emission ross-section	1.8×10^{-20} cm^2
Refractive Index @1064 nm	n0=1.448, ne=1.470
Crystal tructure	Tetragonal
Density	3.95g/cm^3
Mohs Hardness	5
Thermal Conductivity	6 Wm^{-1}K^{-1}
dn/dT	-4.6×10^{-6} (||c) K^{-1},
	-6.6×10^{-6} (||a) K^{-1}
Thermal Expansion Coefficient	10.1×10^{-6} (|c) K^{-1},
	14.3×10^{-6} (||a) K^{-1}
Typical Doping Level	0.5-1%