Tm:YAP

DESCRIPTION

CRYLINK's Tm:YAP crystal products, also known as Thulium-doped $YAlO_3$ crystal. It is a kind of laser crystal product with excellent comprehensive performance. It is widely used in laser medical treatment, military field and atmospheric remote sensing field. The product has high efficiency laser output, good physical and chemical properties, linear polarization laser emission characteristics. Can be used in ladar, laser medical equipment products.

FEATURES

- High-efficiency laser output
- Straight polarization laser emission
- Good physical and chemical performance
- The highest local absorption is in the infrared region

APPLICATIONS

- Lidar
- Light therapy
- Stereolocation neurosurgery
- Atmospheric remote sensing

PARAMETERS

PHYSICAL AND CHEMICAL PROPERTIES

Crystal Structure	Orthogonal – Pbnm
Lattice Constant	a = 0.5138 nm, b = 0.5274 nm, c = 0.7308 nm
Melting Point	1870 °C
Density	5.35 g/cm3
Mohs Hardness	8.5
Specific Heat Capacity	400 J/(kg ·K)
Thermal Conductivity	11W/(m·K)
Refractive Index@ 632 nm	n_a=1.91, n_b=1.92, n_c=1.94

www.crylink.com
sales@crylink.com
+86-21-66566068
Building 7, No.718 Baoqi Road, Baoshan District, Shanghai, China

Tm:YAP

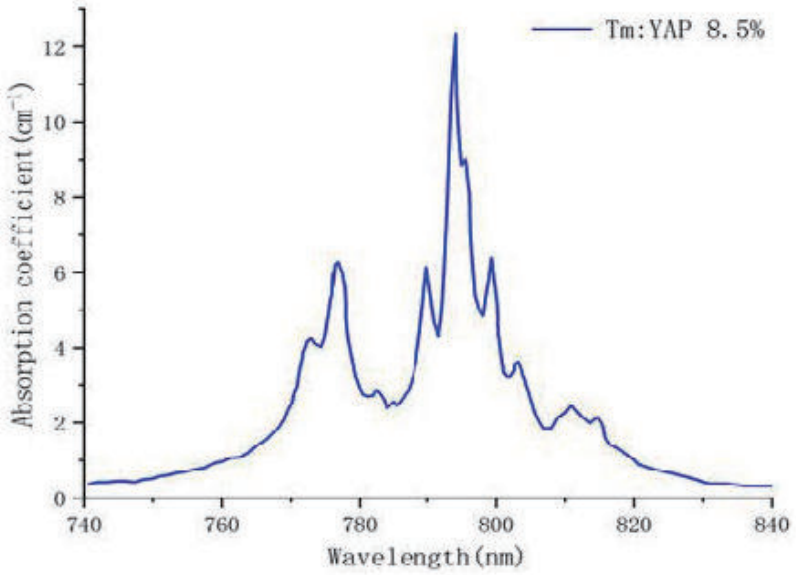
STANDARD

Doping Concentration	Tm: 0.2~15at%
Orientation	[010] or [100] (Pnma) within 5°
Rod Size	Diameter 2~10mm, length 2~100mm
Wavefront Distortion	≤0.125λ/25mm@632.8nm
Extinction Ratio	≥25dB
Dimensional Tolerance	Diamter: +0.00/-0.04, length: ±0.5mm
Parallelism	≤10″
Perpendicularity	≤5′
Flatness	λ/8@632.8nm
Surface Finish	10/5 (MIL-O-13830A)
Chamfer	0.15±0.05mm
AR Coating Reflectivity	≤0.25%

OPTICAL AND SPECTRAL PROPERTIES

Optical Transition	$^3F_4 \rightarrow {}^3H_6$
Absorption Cross Section	$3.7\sim8.5\times10^{-21}cm^2$
Fluorescence Lifetime	4.4~7.7ms
Emission Cross Section	$5\sim6\times10^{-21}cm^2$
Emission Wavelength	1.98mm@ a-axis, 1.94mm@ b-axis
Diode Pump Wavelength	794.8nm@ a-axis, 793.5nm@ b-axis

SPECTRA



www.crylink.com
sales@crylink.com
+86-21-66566068
Building 7, No.718 Baoqi Road, Baoshan District, Shanghai, China