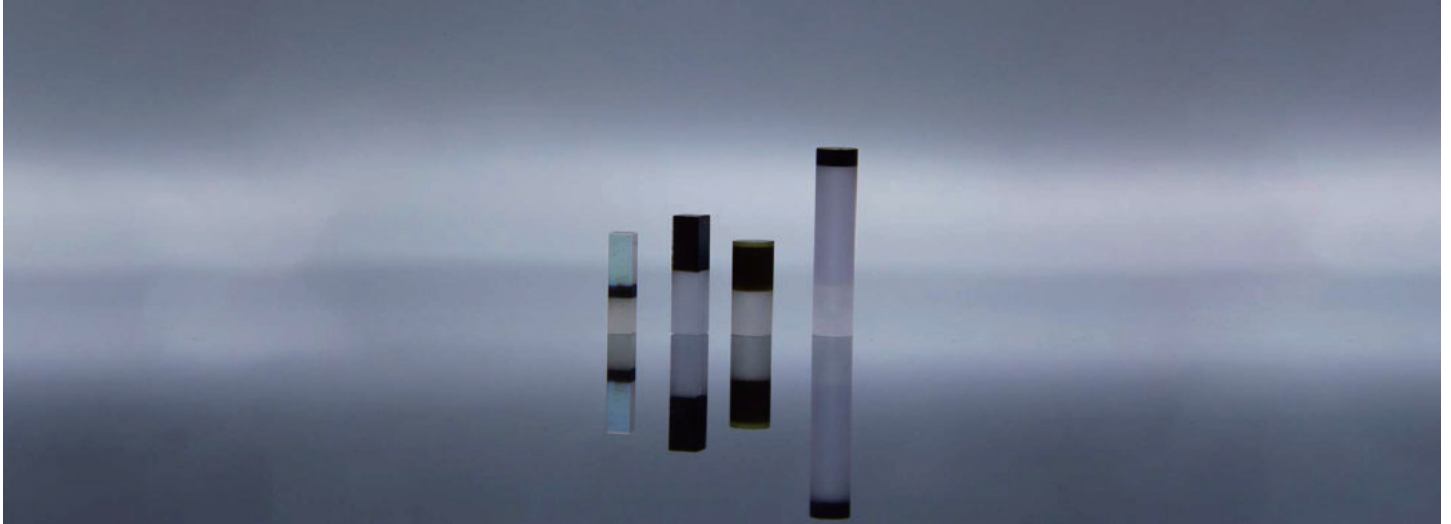


# YVO<sub>4</sub>+Nd:YVO<sub>4</sub>+YVO<sub>4</sub>



## DESCRIPTION

YVO<sub>4</sub>+Nd:YVO<sub>4</sub>+YVO<sub>4</sub> bonding crystal is a bonding crystal formed by bonding pure YAG at both ends of Yb:YAG, which can effectively improve the comprehensive performance of Yb:YAG laser.

The thermal conductivity of Nd:YVO<sub>4</sub> is 11.7w/cm/°k@ 25°C, and the thermal conductivity of pure YVO<sub>4</sub> crystal is //c: 5.23w/m/k; ⊥c: 5.10w/m/k, both ends are bonded to form YVO<sub>4</sub>+Nd:YVO<sub>4</sub>+YVO<sub>4</sub> bonded crystal, which can effectively improve the thermal effect of Yb:YAG crystal, reduce the thermal lens effect formed during laser pumping, improve the beam quality of laser, improve the output efficiency of 457nm and 671nm laser, improve the stability of laser output capacity, and improve the service life of laser.

CRYLINK uses surface activation bonding technology, which is a bonding technology at low or normal temperature. The typical features are surface cleaning and surface activation. Before bonding, the bombardment of fast atoms or ion beams on the bonding surface can effectively increase the bonding strength and achieve high-quality bonding between inorganic materials, metals and semiconductor materials. Compared with the high-temperature thermal bonding method, the surface activation bonding technology has higher bonding force interface, better optical absorption loss and surface shape change control, while the impurities on the thermal diffusion bonding surface cannot be removed and are bonded on the bonding surface. Surface activated bonding technology has the advantages of removing various polishing residual components, removing organic pollutants, removing surface oxide layer, breaking chemical bonds of materials, and improving activation energy.

YVO<sub>4</sub>+Nd:YVO<sub>4</sub>+YVO<sub>4</sub> bonded crystal produced has high bonding strength, small bonding surface absorption loss (generally less than 20ppm) and small change of bonding surface shape (bonding surface shape <math>\lambda/8</math>). The shape of the bonded crystal can be rod, plate, waveguide or sandwich. Various types of coatings can be provided at both ends of the bonded crystal, such as two end antireflection films AR@1064nm+808nm, or s1: HR@1064nm & AR@808nm, S2: PR@1064nm & HR@808nm, etc. YVO<sub>4</sub>+Nd:YVO<sub>4</sub>+YVO<sub>4</sub> bonded crystals are widely used in many fields, such as machinery, material processing, spectroscopy, wafer inspection, display, medical testing, laser printing, data storage and so on.



# YVO<sub>4</sub>+Nd:YVO<sub>4</sub>+YVO<sub>4</sub>

## FEATURES

- Effectively improve the thermal effect of yb:yag crystal
- Reduce the thermal lens effect formed during laser pumping
- Improve the beam quality of laser
- Improve 457nm and 671nm laser output efficiency
- It can improve the stability of the output capacity of the laser and the service life of the laser

## APPLICATIONS

- Humanization in the field of oral treatment
- Holographic, interference, optical storage and other fields
- Laser cutting and welding
- Lidar and optical refrigeration
- Ultrashort pulse research
- Material micromachining
- Multiphoton microscope

## PRODUCT PARAMETERS

YVO <sub>4</sub> +Nd:YVO <sub>4</sub> +YVO <sub>4</sub>			
Materials	YVO <sub>4</sub>	Nd:YVO <sub>4</sub>	YVO <sub>4</sub>
Concentrations	/	0.5%,1%, 2%,2,5%, 3%	
Structure	Rods/Slabs/Sandwich/Waveguide/		
End-face Configuration	Flat/Convex/Wedge		
Side Configuration	Polish/Fine Ground		
Coating available	AR@1064nm+808nm	/	AR@1064nm+808nm
	HR@1064nm&AR@808nm	/	PR@1064nm&HR@808nm
	others	/	others

