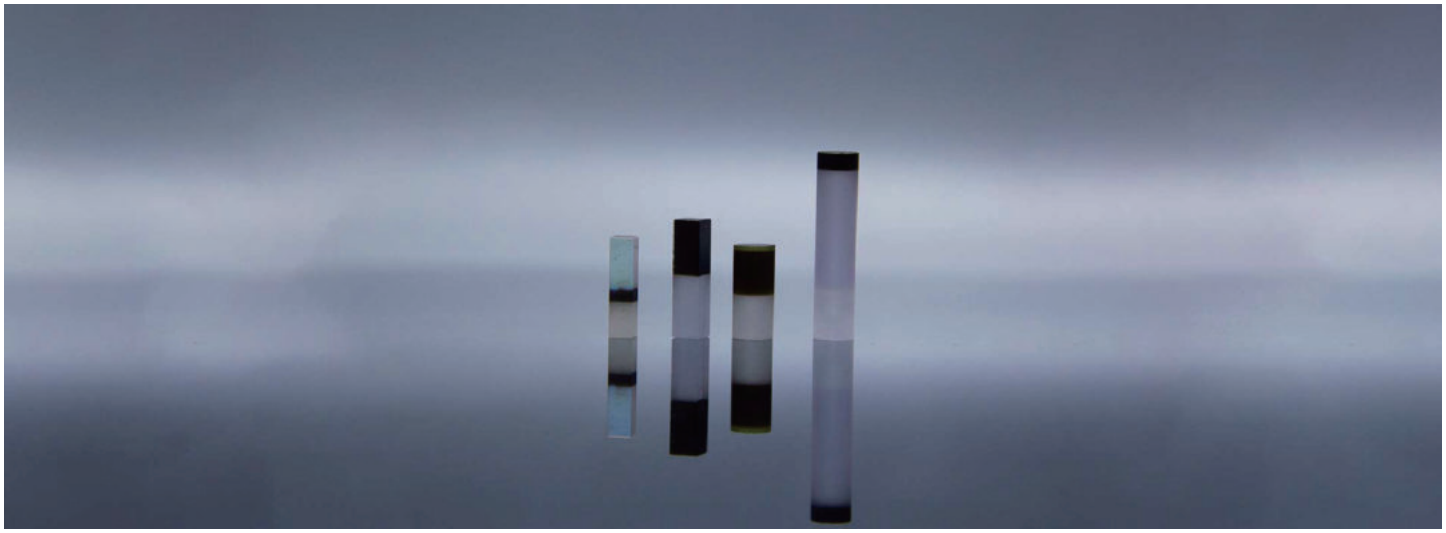
YAG+Er:YAG+YAG



DESCRIPTION

YAG+Er:YAG+YAG bonding crystal is a bonding crystal formed by bonding pure YAG at both ends of Er:YAG, which can effectively improve the comprehensive performance of Er:YAG laser.

Er:YAG thermal conductivity is 14w/m/ K@20°C. 10.5W/m/ K@100 ℃, the thermal conductivity of pure YAG crystal is 14w/m/ K@20°C 10.5W/m/ K@100°C, both ends are bonded to form YAG+Er:YAG+YAG bonded crystal, which can effectively improve the thermal effect of Er:YAG crystal, reduce the thermal lens effect formed during laser pumping, improve the beam quality of laser, improve the output efficiency of 1600nm and 2940nm 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.

The produced YAG+Er:YAG+YAG bonding crystal has high bonding strength, small bonding surface absorption loss (generally less than 20ppm) and small change of bonding surface shape (bonding surface shape <lamda/8). 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/AR@1645nm, or ar/AR @2940nm, or s1: HR@2940nm， S2: PR@2940nm, etc. YAG+Er:YAG+YAG bonded crystals are widely used in plastic surgery and dentistry.

YAG+Er:YAG+YAG

FEATURES

- It can effectively improve the thermal effect of er:yag crystal
- Reduce the thermal lens effect formed during laser pumping
- Improve the beam quality of laser
- Improve 1600nm and 2940nm laser output efficiency
- It can improve the stability of the output capacity of the laser and the service life of the laser

APPLICATIONS

- Applicable to military applications including lidar, telemetry or active imaging
- For long-distance telemetry and ranging
- For oral surgery, dentistry, dental implants and otorhinolaryngology

PRODUCT PARAMETERS

YAG+Er:YAG+YAG			
Materials	YAG	Er:YAG	YAG
Concentrations	/	0.5%, 50%	
Structure	Rods/Slabs/Sandwich/Waveguide/		
End-face Configuration	Flat/Convex/Wedge		
Side Configuration	Polish/Fine Ground		
Coating available	AR@1645nm	/	AR@1645nm
	AR@2940nm		AR@2940nm
	HR@2940nm		PR@2940nm
	others	/	others