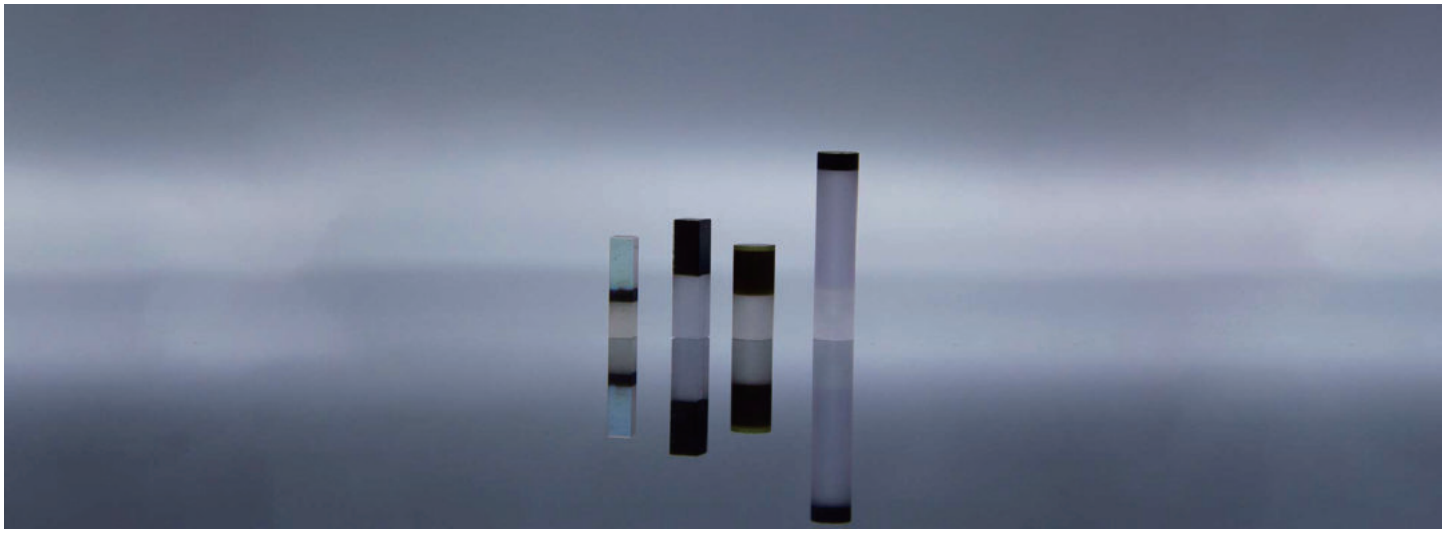
Ti:sapphire+sapphire



DESCRIPTION

Ti:sapphire+sapphire bonded crystal is a bonded crystal formed by bonding sapphire at one end of Ti:sapphire, which can effectively improve the comprehensive performance of Ti:sapphire laser.

The thermal conductivity of sapphire crystal is 25.12w/m/k (@100°C). Bonding to form Ti:sapphire+sapphire bonded crystal can effectively improve the thermal effect of ti:sapphire crystal, reduce the thermal lens effect formed during laser pumping, excellent output efficiency, narrow mode-locked width, high damage threshold, excellent thermal conductivity, improve the beam quality of laser, improve the output efficiency of 800nm laser, and improve the stability of laser output capacity, Improve the service life of the 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 Ti:sapphire+sapphire bonded crystal produced has high bonding strength, small absorption loss of bonding surface (generally less than 20ppm) and small change of bonding surface shape (shape after bonding <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@600 -800nm&532nm, etc. Ti:sapphire+sapphire bonded crystals are widely used in wavelength tunable lasers.

Ti:sapphire+sapphire

FEATURES

- It can effectively improve the thermal effect of ti:sapphire crystal
- Reduce the thermal lens effect formed during laser pumping
- Excellent output efficiency, narrow mode locking width and high damage threshold
- Excellent thermal conductivity and improved laser beam quality
- Improve 800nm laser output efficiency
- It can improve the stability of the output capacity of the laser and the service life of the laser
- Improve the service life of the laser

APPLICATIONS

- Ultrashort pulse mode-locked laser
- Multi pass amplifier and regenerative amplifier

PRODUCT PARAMETERS

Ti:sapphire+Sapphire		
Materials	Ti:sapphire	sapphire
Absorption coefficient	0.6~6.5cm^{-1}	/
Structure	Rods/Slabs/Sandwich/Waveguide/	
End-face Configuration	Flat/Convex/Wedge	
Side Configuration	Polish/Fine Ground	
Coating available	AR@600-800nm&532nm	AR@600-800nm&532nm
	others	others

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