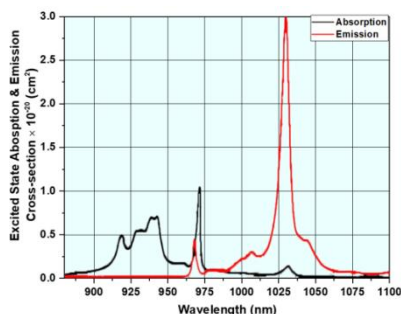


## Yb:YAG

Yb:YAG crystal is a promising solid state laser working material, which is more suitable for diode pumping with traditional Nd doped crystal medium. Compared with Nd:YAG crystals, Yb:YAG crystals have wider absorption bandwidth, lower thermal control requirements in semiconductor laser design, longer laser upper level lifetime, and 3-4 times lower thermal load per unit of pump power.

### Absorption and emission curves of Yb:YAG



### Main features:

- Good optical quality, high slope efficiency
- Wide absorption bandwidth (8 nm @940 nm)
- No excited state absorption or upconversion in the upper energy level of the laser
- High thermal conductivity and high mechanical strength
- Can be easily pumped with InGaAs diodes

### Typical applications:

- Diode Pumped Laser Systems
- Can be used for material micromachining
- Can be used for laser cutting and welding, laser marking machines
- Multiphoton microscopy, ultrashort pulse research
- Holography, interference, optical storage and other fields
- The field of dental treatment

### Standard Products

Model	Diameter (mm)	Length (mm)	Doping (%)	Coating
Y-Y-501	5	2	5	AR/AR@940 nm+1030 nm
Y-Y-502	5	3	5	AR/AR@940 nm+1030 nm
Y-Y-503	5	1	10	AR/AR@940 nm+1030 nm
Y-Y-504	5	2	10	AR/AR@940 nm+1030 nm

For more information about products click on: [www.voyawave.com](http://www.voyawave.com)

### Technical Parameters

Names of Parameters	Values & Ranges
Size tolerance	Diameter: +0.00"/-0.002"mm, Length: ± 0.02" mm
Clear aperture	> 95%
Finish	10/5
Flatness	$\lambda/10@633\text{nm}$
Wavefront distortion	$\lambda/4@633\text{nm}$
Parallelism	≤ 10 arc sec
Perpendicularity	≤ 5 arc min
Doping concentration	Yb: 5~15 at%
Anti-reflection membrane system	≤ 0.25% (@1030nm)
Quality warranty period	1 year (under normal use)

See appendix P35 for more information