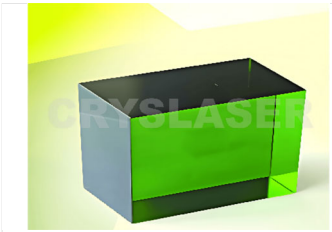



## Er, Yb: Glass

Er,Yb: glass can emit 1535 nm laser and has high stimulated emission cross section, low fluorescence quenching effect and excellent thermal and mechanical properties.

Classification:Laser Crystals

## Detailed introduction

Er,Yb: glass can emit 1535 nm laser and has high stimulated emission cross section, low fluorescence quenching effect and excellent thermal and mechanical properties.
1535nm laser is safe for human eyes and easy to detect. It has a very low loss in SiO2 fiber transmission and good performance in penetrating smoke, fog and haze. It is widely used in military and civil fields.
The laser made with Er:Yb:Glass has a potential of miniaturization, high frequency, high power, etc. The system is more simple, reliable and easy to maintain.

### APPLICATIONS

Laser ranging

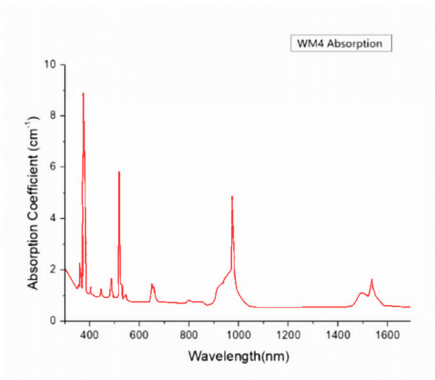
Laser radar

Target designation

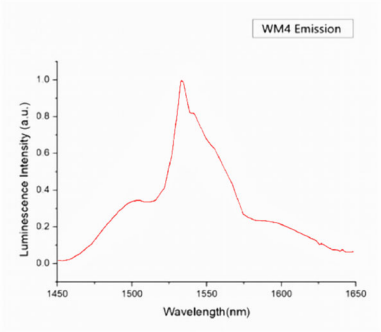
Optical fiber communication

Environmental sensing and monitoring

### Absorption Spectrum




### Emission Spectrum




| Specification | |
|---|---|
| Size | Diameter:3~12.7mm,Length:3~150mm |
| Dimension tolerance | ±0.05 mm |
| Flatness | <λ/8@632 nm |
| Wavefront distortion | <λ/4@632 nm |
| surface quality | 10/5 |
| Parallelism | 10" |
| Perpendicularity | 15 ' |
| Clear aperture | >90% |
| Chamfer | <0.1×45° |

| Physical and Chemical Properties | | |
|---|---|---|
| Model | #1 | #2 |
| The cross section of stimulated emission (10-20$cm^2$ ) | 0.8 | 0.75 |
| Fluorescence lifetime (ms) | 7.7-8.0 | 7.7-8.2 |
| Wavelength (nm) | 1535 | 1535 |
| Transition temperature (°C) | 1.524 | 1.528 |
| Softening temperature (°C) | 1.532 | 1.536 |
| Linear thermal expansion coefficient ($10^{-7}$/K) (20 – 100 °C) | 556 | 530 |
| Linear thermal expansion coefficient ($10^{-7}$/K) (100 – 300 °C) | 605 | 573 |
| Thermal coefficient of Optical path length ($10^{-6}$/K)(20~100°C) | 87 | 82 |
| Thermal conductivity coefficient (25 °C) (W/mK) | 95 | 96 |
| Density (g/$cm^3$) | 3.0 | 2.83 |
| Chemical durability | 52 | 82 |

Keywords: YAG

Previous: Yb：YAG
Next: Co: Spinel