



## CTH:YAG

Ho: Cr: Tm: YAG is a high efficient laser material which lasers at 2.1  $\mu\text{m}$ . It has wide applications in medical military and meteorology fields.

### ADVANTAGES

- High slope efficiency
- Pumped by flash lamp or diode
- Operates well at room temperature
- Operates in a relatively eye-safe wavelength range

### Laser Rods

- Flat/flat
- Parallel/ anti-parallel wedged
- Brewster angle
- Concave/convex radii
- Cylinder grooved

### Specifications

Material	Cr: Tm: Ho: YAG
Dopant concentration	Ho: ~ 0.35at%, Tm: ~ 5.8at%, Cr:~1.2at%
Crystal Orientation	$\pm 5^\circ$
Dimensions	Diameter:3mm-6mm, Length:15-120mm(upon customer' s request)
Extinction Ratio	>25dB(depends on actual size)
Barrel Finish	Ground Finish 400#Grit
Scratch/Dig	10-5@MIL-O-13830A
Diameter Tolerance	+0/-0.05mm
Length tolerance	+/-0.5mm

Perpendicularity	$\leq 5$ arc minutes
Parallelism	$\leq 10$ arc seconds
Chamfer	$\leq 0.15 \times 45^\circ$
Anti-Reflection Coating	$\leq 0.25\%$ @2094 nm

**Properties**

Crystal structure	Cubic
Laser wavelength	2.094um
Melting point	1970°C
Fluorescence lifetime	8.5ms
Absorption linewidth	4nm
Diode pump band	781nm
Major pump bands	400~800nm
Index of Refraction	1.80@2.094um
Density	4.56 gcm-3
Laser Transition	517 - 518
Photon Energy	$9.55 \times 10^{-20}$ J
Emission Cross Section	$7 \times 10^{-21}$ cm <sup>2</sup>