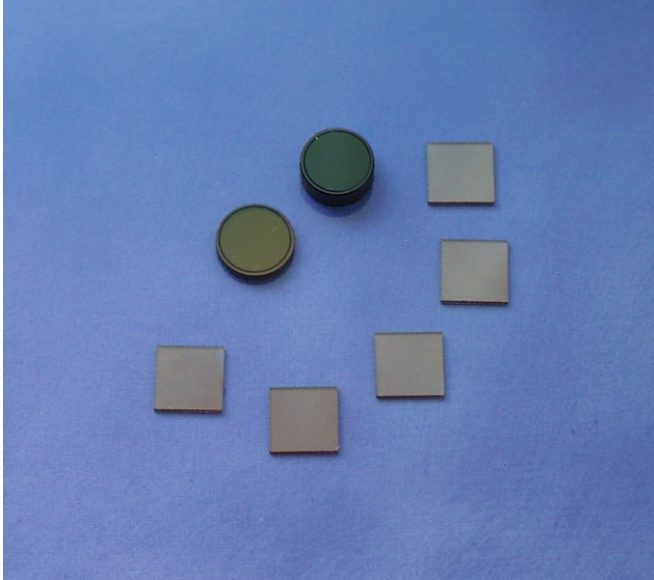


Cr⁴⁺:YAG CRYSTALS

ALL-SOLID-STATE HIGH POWER PASSIVE Q-SWITCH
AND ACTIVE MEDIUM FOR INFRARED FEMTOSECOND LASERS



Material parameters:

| | |
|---------------------|---|
| Material: | Cr ⁴⁺ :YAG (Cr ⁴⁺ doped Y ₃ Al ₅ O ₁₂) |
| Recovery time: | 8.5 μs |
| Saturation fluence: | 0.5 J/cm ² |
| Refractive index: | 1.82 @ 1064 nm |
| Crystal structure: | cubic garnet |
| Hardness: | Mohs 8.5 |
| Density: | 4.56 g/ccm |
| Orientation: | [100] +/- 10° (standard) |

Size:

Standard apertures: 9.5 mm, 8x8 mm², 4x4 mm², 2.5 mm

Clear aperture: min. 0.75 of dimension.

Thickness: depends on the specified O.D. or initial transmission, Cr⁴⁺ concentration and may vary +/- 30% from the specified value.

Surfaces:

Wedge: <30 arcmin

Flatness: 0.5 wave @ 633 nm

Surface quality: 20-10 s/d

Coatings (standard):

AR/AR@1064 nm, R<0.3%

Damage threshold (coated):

>500 MW/cm² for 10 ns pulses

We have a large variety of Cr⁴⁺:YAG standard crystals in stock for:

- Flashlamp-pumped lasers with T=0.25, T=0.32, T= 0.50
- Diode-pumped lasers with T= 0.80, T=0.85, T=0.9 and T=0.95

We are exclusive supplier of Brewster-cut crystals for very high peak power applications.

We also offer specially coated Cr⁴⁺:YAG crystals that serve as OUTPUT COUPLERS. In this way one can save the output mirror and considerably simplify the laser design.

Standard reflections at the exit side are:

R=8.5%, R=50%, R=90%, R=95%.

We also supply crystals with custom specific parameters.