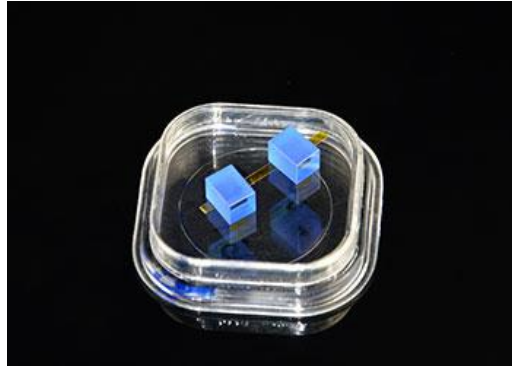
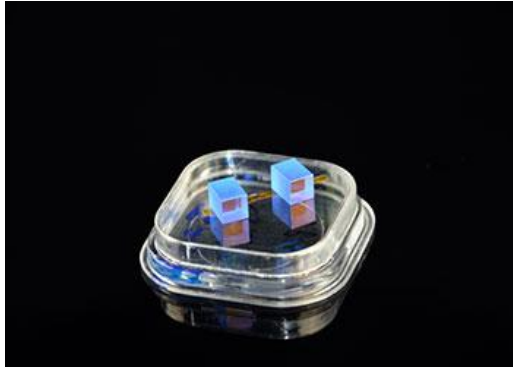


Co²⁺:MgAl₂O₄ (Co²⁺:Spinel) Crystals

- Suitable for 1.54μm eye-safe lasers
- High absorption section and no excited state absorption

Co²⁺:MgAl₂O₄ (Co²⁺:Spinel or Co:MALO) crystals is a new material for passive Q-switching in lasers emitting from 1.2 to 1.6 μm, in particular, for eye-safe 1.54 μm Er:glass laser, but also works at 1.44 μm and 1.34 μm wavelengths. High absorption cross section ($3.5 \times 10^{-19}\text{cm}^2$) permits Q-switching of Er:glass laser without intracavity focusing both with flash-lamp and diode-laser pumping. Negligible excited-state absorption results in high contrast of Q-switch, i.e. the ratio of initial (small signal) to saturated absorption is higher than 10. Hangzhou Shalom EO offer the high quality **Co:Spinel crystals** materials with high optical quality and uniform distribution of Co²⁺ in laser grade polishing and coatings.



SPECIFICATIONS

Specifications	
Material	Co ²⁺ :MgAl ₂ O ₄
Orentation	<111>+/-0.5°
Doping rate of Co2+	0.05-0.3 atm%
Optical density	0.1-0.9
Absorption coefficient	1.0cm ⁻¹ -7cm ⁻¹
Transmittance	30%-99%
Absorption section	3.5 x 10 ⁻¹⁹ cm ²
Thickness/Diameter tolerance	+/-0.1mm
Parallelism	10''
Perpendicular	5'
Surface quality	10/5
Wavefront distortion	Lambda/8 @ 632nm
Flatness	Lambda/8 @ 632nm
Aperture	>90%
Chamfer	0.1 x 45°
HR Coating	<=0.2%(@ 1533nm)
Damage threshold	>500MW/cm ²