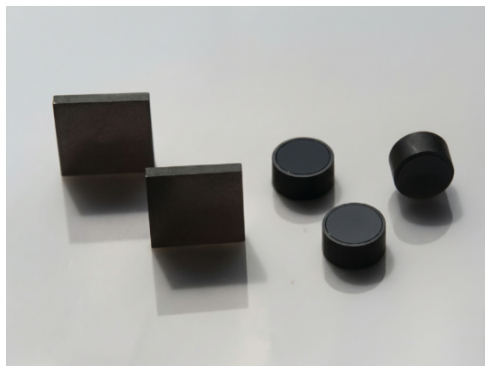


LASER CRYSTALS

Cr:YAG Passive Q-Switch

Product Brochure & Technical Reference

Cr:YAG passive Q-switch components for laser-cavity design. Specify transmission, geometry, optical quality and coatings in relation to the gain medium and cavity configuration.



Reference product image. Shown geometry is illustrative.

Material reference properties / options

Parameter	Typical Value / Option
Material	Cr ⁴⁺ :YAG
Orientation	<111>, <110>, or <100>
Initial absorption coefficient	0.5-7 /cm at 1064 nm
Initial transmittance	5%-95% at 1064 nm
Diameter tolerance	Diameter: +0/-0.02 mm; W x H: +/-0.1 mm
Length tolerance	+/-0.5 mm
Dimensions	Diameter 3-12 mm; H x W 2 x 2 mm to 30 x 30 mm; custom size available upon request
Anti-reflection coating	R < 0.15% at 1064 nm per surface

Reference values and options for selection. Confirm the material grade, geometry, test conditions and acceptance criteria for the quoted configuration.

LASER CRYSTALS

Configuration & quotation

Define the component around your application

Application examples: Passive Q-switching for Nd:YAG laser cavities; Compact diode-pumped and lamp-pumped pulsed lasers; Passive Q-switching for Nd:YVO4 and Nd:YLF lasers

Specifications of Cr:YAG Passive Q-Switch Crystal

Parameter	Typical Value / Option
Barrel finish	Ground finish, 400# grit
Clear aperture	>90% central area
Parallelism	<10 arcsec
Perpendicularity	<5 arcmin
Flatness	< $\lambda/8$ at 632.8 nm
Scratch / dig	10/5, MIL-O-13830A
Damage threshold	>750 MW/cm ² at 1064 nm, 10 ns, 10 Hz

Specifications of Cr:YAG Passive Q-Switch Crystal

Property	Typical Value
Chemical formula	Cr ⁴⁺ :Y ₃ Al ₅ O ₁₂
Crystal structure	Cubic
Melting point	Approx. 1970 C
Density	Approx. 4.55 g/cm ³
Mohs hardness	8.5
Operating absorption range	Approx. 950-1100 nm, depending on laser design and specification

Prepare your quotation

RFQ Item	Information to Provide
Operating laser	Nd:YAG, Nd:YVO4, Nd:YLF, Yb:YAG, or other laser type; operating wavelength.
Initial transmittance	Target small-signal T0 at the operating wavelength, acceptable tolerance, and whether the value applies to the finished coated part or internal crystal transmission.
Dimensions	Diameter or square aperture, thickness, clear aperture, chamfer, and drawing if available.
Coating	AR coating wavelength, reflectivity requirement, or custom coating design.
Cavity condition	Pump source, gain crystal, beam diameter, output coupling, pulse energy, and repetition rate target.
Quality requirement	Flatness, parallelism, scratch/dig, damage threshold, inspection method, quantity, and delivery schedule.

Reference values and options for selection. Confirm the material grade, geometry, test conditions and acceptance criteria for the quoted configuration.

Send drawings for engineering review

sales@atrscintillator.com | +86 17796747312

Open product and inquiry page | Hangzhou, Zhejiang, China