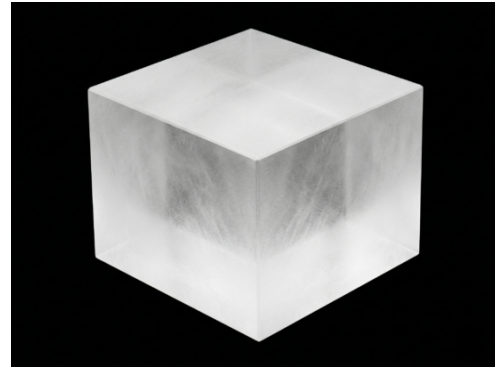


SCINTILLATION CRYSTALS

Nal(Tl) Scintillation Crystal

Product Brochure & Technical Reference

Thallium-doped sodium iodide scintillation material for gamma detection and spectroscopy. Moisture protection, crystal geometry and optical coupling should be considered together.



Reference product image. Shown geometry is illustrative.

Material reference properties / options

Parameter	Typical Value
Chemical formula	Nal(Tl)
Crystal structure	Cubic
Density	3.67 g/cm ³
Hygroscopicity	Highly hygroscopic; hermetic sealing required
Light yield	Approx. 38,000 photons/MeV
Decay time	Approx. 250 ns
Emission peak	Approx. 415 nm
Refractive index	Approx. 1.85 at emission peak

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

SCINTILLATION CRYSTALS

Configuration & quotation

Define the component around your application

Application examples: Gamma-ray spectroscopy and isotope identification; Environmental radiation monitoring instruments; Well logging and geological exploration tools

Specifications of NaI(Tl) Crystal

Parameter	Typical Value
Melting point	651 C
Mohs hardness	2.1
Cleavage plane	(100)
Energy resolution	Approx. 6-7% at 662 keV

Specifications of NaI(Tl) Crystal

Format	Details
Standard cylinders	1 inch x 1 inch, 2 inch x 2 inch, 3 inch x 3 inch, and custom diameters
Rectangular blocks	Customized dimensions for portal monitors, arrays, and area detector layouts
End-well crystals	Machined well designs for high-efficiency sample counting
X-ray type NaI(Tl)	Thin crystal and window options for low-energy X-ray detection
Encapsulation material	Aluminum or stainless-steel housing
Optical windows	Optical glass, quartz, or customized transparent windows
Reflector options	PTFE tape, alumina powder, or project-specific reflector design
Readout interface	Specify the optical output face and coupling requirements for your own photosensor; crystal-package scope is confirmed in the quotation

Nal(Tl) Crystal Formats and Encapsulation Options

Format	Best Fit	Key Design Point
General encapsulated Nal(Tl)	Standard gamma spectroscopy and counting	Hermetic housing protects hygroscopic Nal(Tl)
Square or rectangular Nal(Tl)	Tiled detector layouts and area coverage	Flat geometry improves packing and module layout
X-ray type Nal(Tl)	Low-energy X-ray detection	Thin crystal and window design improve low-energy response
End-well Nal(Tl)	Sample counting	Well geometry surrounds the sample for higher counting efficiency
Custom crystal package	Drawing-defined mechanical integration	Send crystal and housing dimensions, optical output interface and quantity for review

Prepare your quotation

RFQ input	Information to provide
Material / format	State the material or grade, crystal, screen, panel or bar format and intended application.
Geometry / finish	Provide a drawing, dimensions, tolerances, surface treatment and wrapping or support requirements.
Readout / acceptance	Give the optical readout arrangement and define the test conditions and acceptance criteria.
Order details	Provide quantity, destination and the required 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

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Open product and inquiry page | Hangzhou, Zhejiang, China