

Hilger Crystals

State-of-the-art scintillation and detection solutions
for security, defence, and medical industries



FS 613925

EMS 694354

OHS 718450

ABOUT

Hilger Crystals is an ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 certified company with a long-established history and proven reputation producing high-quality synthetic crystals for infrared spectroscopy and X- and gamma-ray detection. Products can be built to custom design requirements and supplied within short lead times.

COLLABORATE TO CREATE

Hilger Crystals prides itself in developing crystal materials in conjunction with its customers requirements. This ensures that customers receive product that is optimized for their specific application. This collaboration has been proven successful for both academic projects and commercial engagements.

SCINTILLATION CRYSTALS

We produce an extensive range of scintillation crystals chosen for their high density, excellent light output and short decay constants. Our scintillation crystals are used in X- and gamma-ray detectors and other non-destructive testing, such as baggage scanning systems, medical applications, and academic research. High-quality raw materials and a strictly controlled growth environment ensure that all Hilger scintillation crystals achieve the highest standard required for low-background applications in research and critical commercial applications. Our crystals can be supplied as a single unit or as a complete assembly.

IMAGING ARRAYS

Our linear and two-dimensional arrays vary in size from 5mm to 200mm, and can be coupled directly to a position-sensitive PMT, CCD array, SiPM, or linear photodiode to form a complete assembly.



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INFRARED MATERIALS

The various optical materials available from Hilger Crystals are utilized as windows and beamsplitters for infrared spectroscopy. Sizes from 2mm to 300mm can be supplied as blanks, pre-polished or polished. Ingots are tested to ensure they offer low absorption, low scatter and high uniformity.

THALLIUM-DOPED SODIUM IODIDE

Hilger Crystals is a major producer of thallium-doped sodium iodide. Having supplied this to the nuclear industry for many years, these crystals are subject to strict testing procedures to ensure the highest quality. They are normally supplied in aluminium housings, but can also be supplied as complete detectors.

OPTICAL CRYSTALS

Caesium Iodide - CsI
Calcium Fluoride - CaF₂
Lithium Fluoride - LiF
Potassium Bromide - KBr
Potassium Chloride - KCl
Potassium Iodide - KI
Sodium Chloride - NaCl



SCINTILLATION CRYSTALS

Bismuth Germanate (BGO) - Bi₄Ge₃O₁₂
Cadmium Tungstate - CdWO₄
Caesium Iodide - CsI
CLYC - Cs₂LiYCl₆(Ce)
Europium-doped Calcium Fluoride - CaF₂ (Eu)
GLuGAG - (Gd,Lu)₃(GaAl)₅O₁₂(Ce)
Lutetium Yttrium Silicate - LYSO(Ce)
Sodium-doped Caesium Iodide - CsI(Na)
Sodium Iodide - NaI
Thallium-doped Caesium Iodide - CsI(Tl)
Thallium-doped Sodium Iodide - NaI(Tl)
Yttrium Aluminium Garnet - YAG(Ce)
Yttrium Aluminium Perovskite - YAP(Ce)
Zinc Tungstate - ZnWO₄