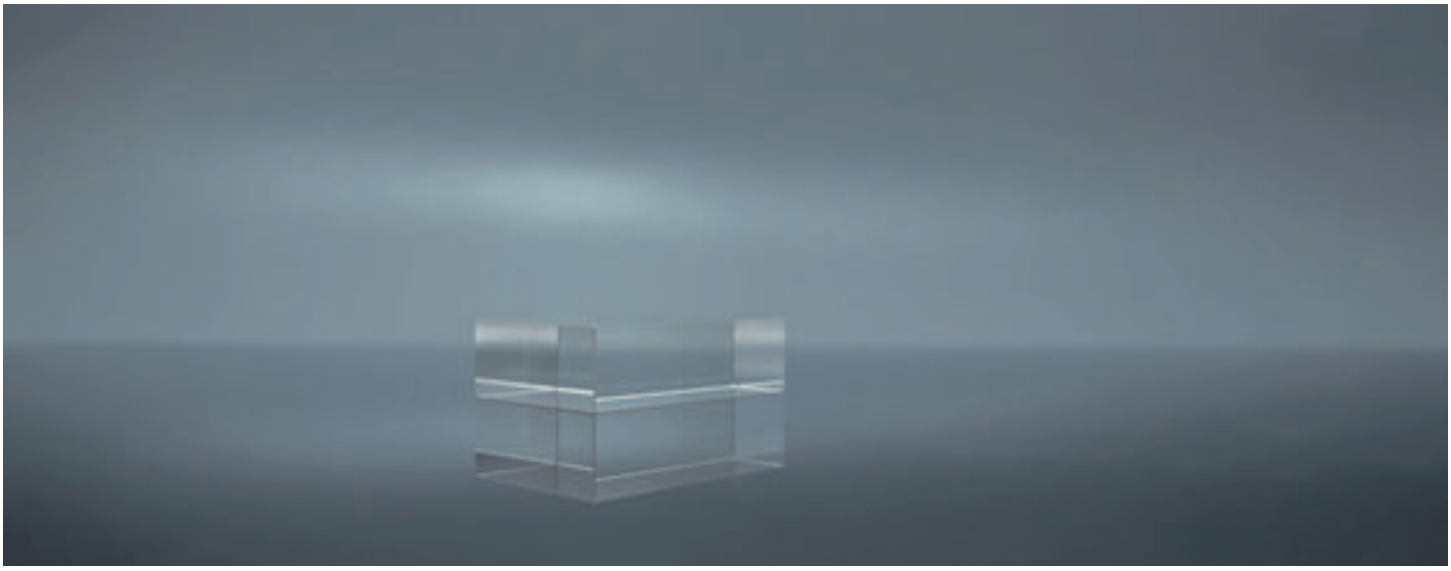
CeF_3



DESCRIPTION

CeF_3 crystals, also known as cerium fluoride crystals, are magneto-optical crystals with excellent overall performance, and their high density, good temperature stability, high detection efficiency, and fast response time make them ideal for use as detection materials in high-energy physics experimental devices and have a wide range of applications in the fields of Faraday isolators, X-ray detectors, beta-ray detectors, and gamma-ray detectors. CeF_3 is also a scintillation material. CeF_3 is also a scintillation crystal, a new type of inorganic scintillator for medical imaging and high-energy physics, with high density, short decay time, and good radiation hardness.

FEATURES

- High density
- Insoluble
- Fast decay time
- High detection efficiency
- High atomic number
- Good temperature stability

APPLICATIONS

- γ Radiographic testing
- Faraday isolator
- High energy and nuclear physics
- X-ray, β Radiographic testing

PHYSICOCHEMICAL PROPERTIES

Attribute	Numerical value
Material	CeF_3
Density g/cm^3	6.16
Melting point (℃)	1443
Refractive index @ 400nm	1.62
Radiation length (cm)	1.68
Emission peak (nm)	340 (slow); 300 (fast)
Attenuation constant (ns)	30 (slow); 8 (fast)
Optical output [NaI(TI)=100%]	8.6

CeF_3

FLASHING NATURE

Attribute	Numerical value
Wavelength (maximum emission) (nm)	286, 300, 340
Wavelength range (nm)	280-700
Radiation length (cm)	1.68
Absorption length (cm^{-1})	3.5
Light output (pH / MeV)	340-470
Thermal neutron cross section	0.65 target

SPECTRA