

# CeBr<sub>3</sub>

Excellent light output,  
Excellent energy resolution, and  
Fast decay time  
Scintillator



CeBr<sub>3</sub>

## Product Information

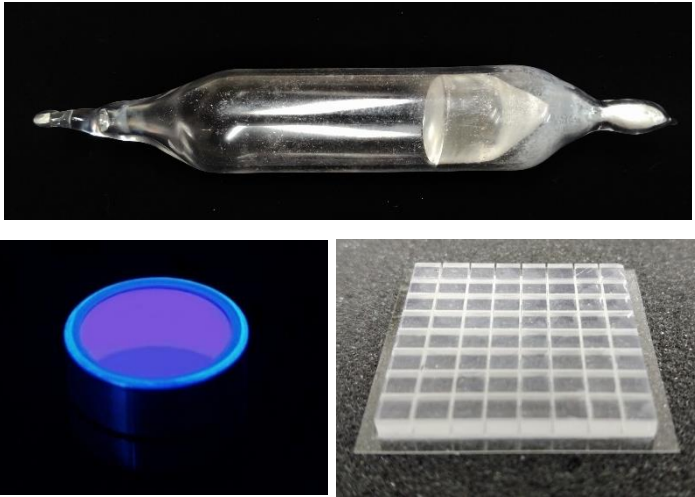


Fig.1: Photograph of CeBr<sub>3</sub> scintillator

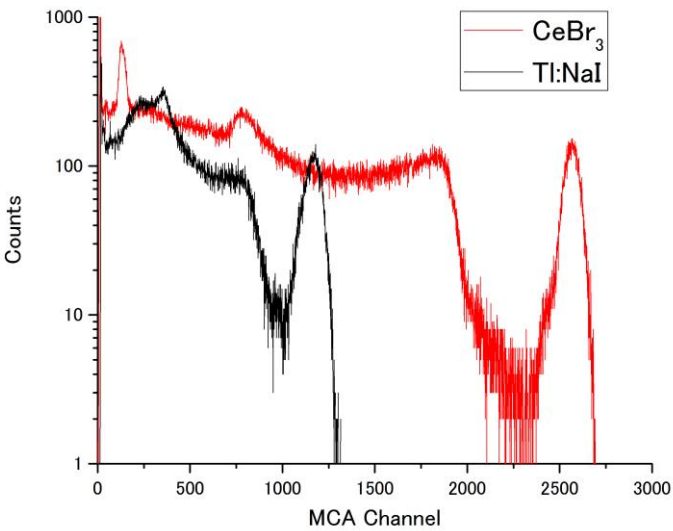


Fig.2: Pulse height spectra of CeBr<sub>3</sub> and Tl:NaI irradiated with gamma rays from a <sup>137</sup>Cs source.

## Outline

CeBr<sub>3</sub> scintillator is one of the best inorganic scintillators with excellent light output, energy resolution, and fast decay time. Compared with Ce:LaBr<sub>3</sub>, CeBr<sub>3</sub> has quite-small intrinsic gamma-ray background. Especially for applying to timing measurements, CeBr<sub>3</sub> is the best candidate among inorganic scintillators.

## Scintillation Properties\*2

Light output [photons/MeV]	~70,000
Energy resolution (662 keV, FWHM) [%]	~4
Decay time [ns]	20
Emission wavelength [nm]	370
Density [g/cm <sup>3</sup> ]	5.2

\*2 All scintillation properties were measured using 2 x 2 x 1 mm<sup>3</sup> sample coupled with R7600U-200 PMT.

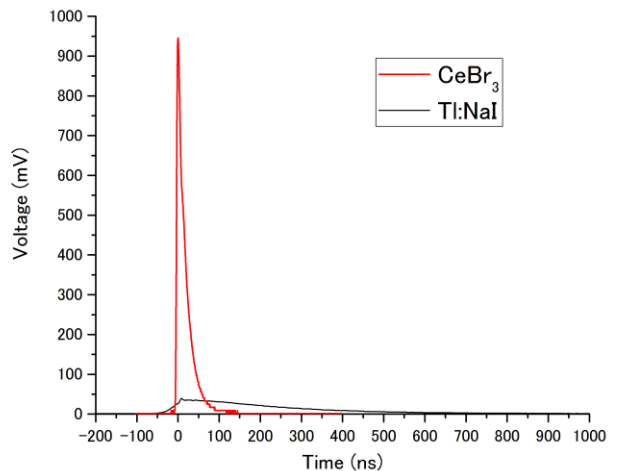


Fig.3: Scintillation decay curves of CeBr<sub>3</sub> and Tl:NaI irradiated with gamma-rays from a <sup>137</sup>Cs source

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