SCIONIX

LBC Scintillation Detectors

High-resolution LBC (lanthanum bromochloride) scintillation detectors

LBC has properties similar to $LaBr_3$(Ce) and typically gives 3% FWHM at 662 keV. The material is mechanically a little stronger than $LaBr_3$ but has the same La-138 background.

Energy resolution at 662 keV
3% FWHM (typical) [1]

Photoelectron yield (NaI(Tl) = 100)
140 [1]

Specifications

DETECTOR

Scintillator	LBC – cerium-doped lanthanum bromochloride	[1]

PERFORMANCE

Energy resolution at 662 keV	3% FWHM (typical)	[1]
Typical resolution by energy	30 keV (^{129}I) 15%; 59.5 keV (^{241}Am) 10%; 122 keV (^{57}Co) 6.4%; 356 keV (^{133}Ba) 4%; 662 keV (^{137}Cs) 3%; 1,332 keV (^{60}Co) 2.5%	[1]

ENVIRONMENT & RATINGS

Intrinsic background	The same La-138 background as $LaBr_3$	[1]

GENERAL

Emission maximum	380 nm	[1]
Refractive index	1.90	[1]
Photoelectron yield (NaI(Tl) = 100)	140	[1]
Hygroscopic	Yes	[1]
Mechanical properties	Mechanically a little stronger than $LaBr_3$	[1]

Sources

[1] **High resolution LBC scintillators – data sheet**
Scionix · datasheet · p. 1; p. 1, table · checked 2026-11-26
https://scionix.nl/wp-content/uploads/2022/10/LBC-datasheet.pdf

Every value is taken from the manufacturer's own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer's published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.