SCIONIX

51BM0.25/SIP-EJ444-E3-X2

Thin alpha/beta SiPM detector (ZnS(Ag) + plastic scintillator)

Thin detector for alpha and beta radiation with a ZnS(Ag) and plastic scintillator (EJ-444), Ø 51 x 0.25 mm, read out by a SiPM array. The bias generator and preamplifier are built in and temperature-compensated. Alphas and betas are separated by pulse shape discrimination, and the connector fits the BrightSpec Topaz-SiPM.



Scintillator
ZnS(Ag) + plastic scintillator, Ø 51 x 0.25 mm (EJ-444) [1]

Power supply
+5–16 V (3 mA) [1]

Compatible electronics
BrightSpec Topaz-SiPM (compatible connector) [1]

Specifications

DETECTOR

Scintillator	ZnS(Ag) + plastic scintillator, Ø 51 x 0.25 mm (EJ-444)	[1]
Light sensor	SiPM array J-60035-4P	[1]

PERFORMANCE

Noise level	< 50 keV (beta) at 22 °C	[1]

ELECTRONICS & SIGNAL

Gain	Approx. 75 mV/MeV (beta); approx. 500 mV per 5.48 MeV (alpha)	[1]
Pulse shape discrimination	Alphas and betas are separated by pulse shape discrimination (2D PSD)	[1]

CONNECTIVITY & INTERFACE

Electrical connection	LEMO FFA0S302CLAC44; 50 cm shielded 4-core cable	[1]

POWER & BATTERY

Power supply	+5–16 V (3 mA)	[1]

MECHANICAL

Detector housing	Black light-tight polyester	[1]

ENVIRONMENT & RATINGS

Entrance window	Light-tight double aluminised Mylar, 0.9 mg/cm²	[1]

GENERAL

Protection grid	Stainless steel grid with 72% transmission	[1]
Compatible electronics	BrightSpec Topaz-SiPM (compatible connector)	[1]
Rise time	150 ns (beta), 1 µs (alpha), 0–100%	[1]

Fall time	1.2 µs (beta), 3 µs (alpha)	[1]

Sources

[1] **51BM0.25/SIP-EJ444-E3-X2 – data sheet**
Scionix · datasheet · p. 1; p. 2 · checked 2026-11-26
https://scionix.nl/wp-content/uploads/2022/10/Alpha-Beta-SiPm-scintillator.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.