BRIGHTSPEC

Topaz-SiPM

Miniature MCA for scintillators with silicon photomultipliers (SiPM)

The smallest MCA in the Topaz series, designed for scintillation detectors with silicon photomultipliers (SiPM). It powers the SiPM preamplifier, has noise reduction for noisy SiPMs and is powered from the PC via USB. The circuit board is available separately to O EM customers.



Spectrum channels
Up to 4,096 [2]

Weight
Less than 70 g (including box) [1]

Specifications

DETECTOR

Compatible detectors	Scintillation detectors with SiPMs, e.g. with NaI(Tl), CsI(Tl), BGO, $LaBr_3$(Ce) o r $LaCl_3$(Ce)	[1]

ELECTRONICS & SIGNAL

Spectrum channels	Up to 4,096	[2]
Gain	×1–×16	[2]
Digital filter rise time	0.1–12 µs in 0.2 µs steps; flat top 0.1–8.0 µs in 0.1 µs steps (trapezoidal shaper)	[1]

CONNECTIVITY & INTERFACE

Communication	USB 2.0 (1.5 m cable included)	[1]

POWER & BATTERY

Preamplifier power	5 V, 20 mA for the detector’s SiPM preamplifier	[1]
Supply voltage	Via USB from the PC	[2]
Power consumption	Typically 1.1 W	[1]

MECHANICAL

Dimensions	Box 70 × 45 × 26 mm (L × W × H); PCB 63 × 39 mm	[1]
Weight	Less than 70 g (including box)	[1]

GENERAL

Acquisition modes	PHA (pulse height analysis) and MCS (multichannel scaling)	[2]

Sources

[1] Topaz-SiPM technical specifications (V1.03)
BrightSpec · datasheet · p. 1, Introduction; p. 2, Technical Specifications; p. 2, Technical Specifications – Digital Settings (printed as µs; the PDF text layer has a symbol-font character in plac · checked 2026-10-16
https://www.brightspec.be/brightspec/downloads/Topaz-SiPM_Spec_V1.03.pdf

[2] Topaz-SiPM
BrightSpec · product-page · Product page – Main features · checked 2026-10-16
https://www.brightspec.be/brightspec/?q=node/45

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.