H3D

M Series (M400)

Integrable CZT spectrometer

A compact CZT detector module for high-resolution spectroscopy and integration into customer systems.



Detector type	Spectroscopy energy range	Weight
M400: CZT (CdZnTe) [1]	**M400: 50–3000 keV** [1]	**M400: 0.6 kg** [1]

Specifications

DETECTOR		
Detector type	M400: CZT (CdZnTe)	[1]
Detector volume	M400: >19 cm³; M400-15: >29 cm³ (option)	[1]
Radiation field of view	M400i (option): 4π (360°)	[1]
MEASURING RANGE		
Spectroscopy energy range	M400: 50–3000 keV	[1]
Imaging energy range	M400i (option): 250–3000 keV	[1]
CONNECTIVITY & INTERFACE		
Communication	M400: USB to computer, USB to Ethernet; Wi-Fi available	[1]
POWER & BATTERY		
Power supply	M400: 5 V, <7 W through USB-C or DB9; PoE capable	[1]
MECHANICAL		
Dimensions	M400: 10.2 × 5.7 × 5.7 cm (nominal)	[1]
Weight	M400: 0.6 kg	[1]
ENVIRONMENT & RATINGS		
IP rating	M400: IP67	[1]
perating temperature	M400: –20 to +50 °C with fan; –10 to +35 °C without fan. M400Q: –5 to +35 °C	[1]
GENERAL		
Maximum event rate	M400: 150 kcps	[1]

Sources

[1] M400 Custom Integrable Detector Module – M400 Base Specifications (ST-33)
H3D · datasheet · p. 2 'M400 Base Specifications', Crystal Volume; p. 2 'Crystal Volume' and box 'Extra-High-Efficiency Option (M400-15)'; p. 2 'Spectroscopy Range' · checked 2026-10-16
https://h3dgamma.com/M400Specs.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.