DECTRIS

POLLUX

Versatility meets performance

POLLUX®

Versatility Meets Performance in X-Ray Detection

DECTRIS POLLUX® is the lab detector that redefines what you can expect from compact, energy-discriminating X-ray detection. Whether you're integrating it into a next-generation instrument or want to run fast measurements of high-quality data in the lab, POLLUX delivers exceptional results — consistently and effortlessly.

Designed to deliver the **optimal balance between energy resolution, count rate, and active area**, POLLUX sets a new benchmark for real-world performance. With dual energy discrimination and excellent resolution, POLLUX effectively suppresses fluorescence and high-energy background, providing clearer signals and better peak-to-background ratios. Its large active area captures more of the beam and covers a wider angular range, enabling faster measurements and improved data quality. Thanks to its superior count rate capabilities, POLLUX enables accurate measurement of high intensities and supports absorber-free reflectometry experiments.

Engineered for versatility, POLLUX is ready for everything from diffraction to spectroscopy. With its compact form factor and effortless integration, it's an easy fit for any instrument. And thanks to robust electronics and passive cooling, it offers best possible reliability.

Key Advantages

Excellent energy resolution and dual energy discrimination for effective background suppression.

Superior count rates for unparalleled dynamic range.

Pixel detector with 2D, 1D and 0D readout modes.

Up to 400 Hz frame rate for fast scanning.

Large active areas for wide angular coverage.

Applications

- Powder X-ray diffraction
- Residual stress
- X-ray reflectometry
- Wavelength-dispersive X-ray spectroscopy
- Small- and wide-angle X-ray scattering

Technical Specifications

	POLLUX	POLLUX PANORAMA
Active area (W x H) [mm²]	19.2 × 14.4	57.9 × 14.4
Pixel array (W x H)	256 × 192	772 × 192
Pixel size (W x H) [µm²]	75 × 75	
Count rate per pixel (max., @8 keV) [ph/s]	1.0×10^6	
Energy resolution (FWHM @8 keV) [eV]	< 600	
Energy range [keV]	4.5 - 9.3	
Number of energy thresholds	2	
Readout modes	2D, 1D, 0D, each with ROI	
Frame rate (max. for 2D/1D/0D) [Hz]	100/100/400	
Readout time	Zero dead time continuous readout	
Sensor material	Silicon	
Sensor thickness [µm]	320	
Point-spread function (FWHM) [pixels]	1	
Vacuum compatibility	Optional	
Cooling	Passive air	
Dimensions (W x H x D) [mm³]	29 × 62 × 37	68 × 62 × 37
Weight [kg]	0.15	0.3

* Specifications are subject to change without prior notice.

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