

# lambda60K



Large Area **Medipix3** Based Detector Array

a DESY spinoff company



Designed for high-end X-ray imaging, the LAMBDA 60K provides fast, sensitive detection in a compact package using the Medipix3 chip.

Pioneered by one of the leading research institutes of the world LAMBDA cameras provide the speed and resolution for even the most demanding tasks.

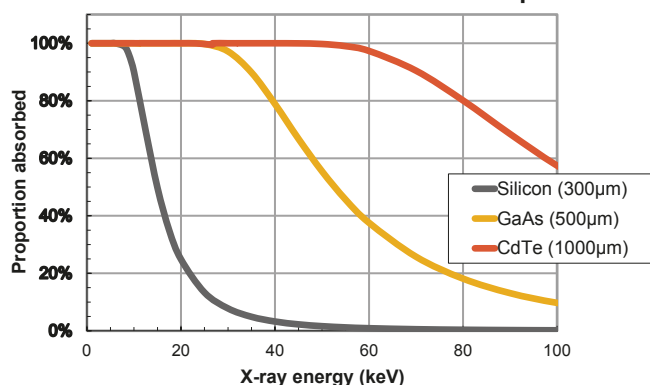


## LAMBDA 60K specifications

Sensor	Silicon	GaAs	CdTe
Sensor thickness	300 $\mu\text{m}$	500 $\mu\text{m}$	1000 $\mu\text{m}$
Pixel size	55 $\mu\text{m}$ x 55 $\mu\text{m}$		
Detector layout (1 module)	1 sensor		
No of Pixels	256 x 256		
Dynamic range	24 bits maximum (dependent on readout mode)		
Energy range	6 – 25 keV	8 – 75 keV	8 – 150 keV
Adjustable threshold range	4 – 40 keV	5 – 50 keV	5 – 75 keV
Frame rate	Up to 2000 Hz (12-bit mode)		
Readout time	No readout time in 12-bit mode, 1 ms in 24-bit mode		
Point spread function	1 pixel FWHM		
External trigger / gate	3.3V TTL		
Software interface	Tango server or open-source hardware library available		
Cooling	Air cooling		
Dimensions (L*H*W)	TBA		
Weight	TBA		
max countrate with correction (10% dev)	$2.5 \times 10^8$ counts/mm <sup>2</sup> /s		

*Specifications are subject to change without notice*

## LAMBDA sensors: Photoelectric absorption



The LAMBDA pixel detector is available with different sensor layers for different X-ray energy ranges. For hard X-ray detection, the GaAs and CdTe LAMBDA systems replace the standard silicon sensor layer in LAMBDA. This provides high quantum efficiency at high X-ray energies (75% at 40keV for GaAs, and 75% at 80keV for CdTe), while retaining all other specifications.

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