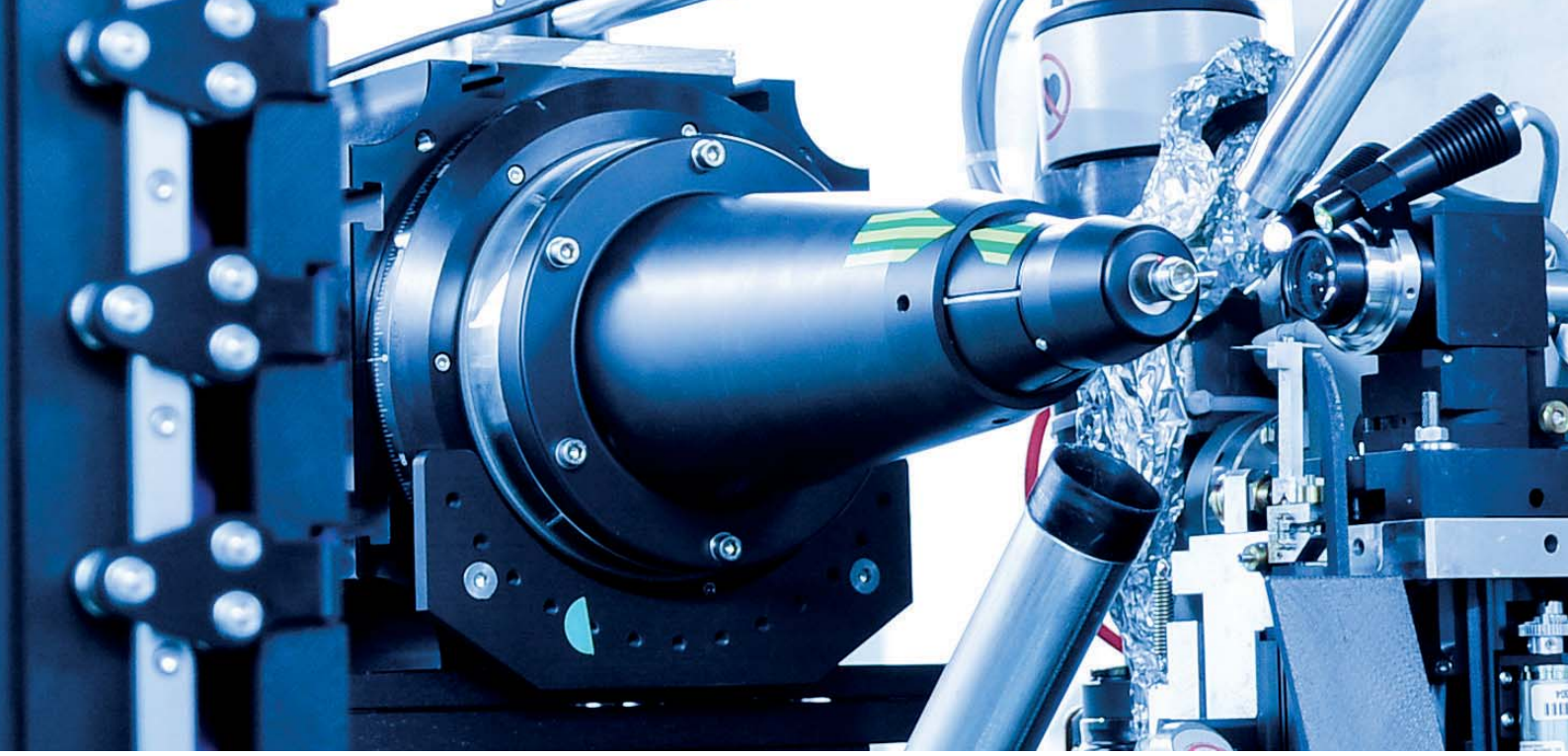
Introduced at SRI 2018

DECTRIS
detecting the future



EIGER2 X CdTe

High resolution at high energies



Cutting-Edge Technology for 4th Generation Synchrotrons

EIGER2 X CdTe detectors are for scientists who need the highest resolution and frame rates at high energies. You can now detect photons with energies of up to 100 keV with a spatial resolution at the single-pixel level of 75 µm. Thanks to dead-time free readout, you won't lose photons between frames. The second energy discriminating threshold allows you to image your samples in two energy bins or cut higher harmonics to reduce background. Prepare your beamline for the future with a maximum count rate capability of 10^7 photons/s/pixel.

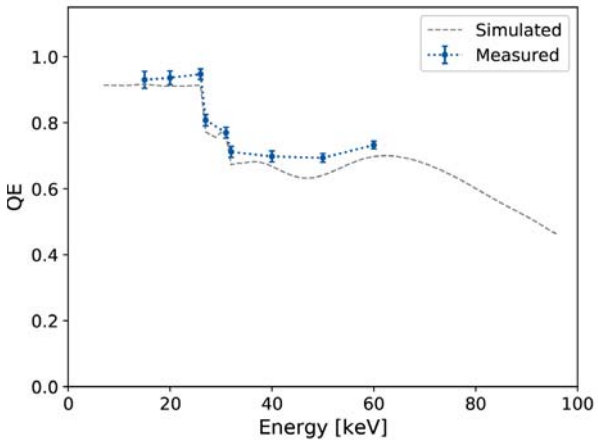
EIGER2 X CdTe detectors combine highest performance with ease of integration and operation.

Key Advantages

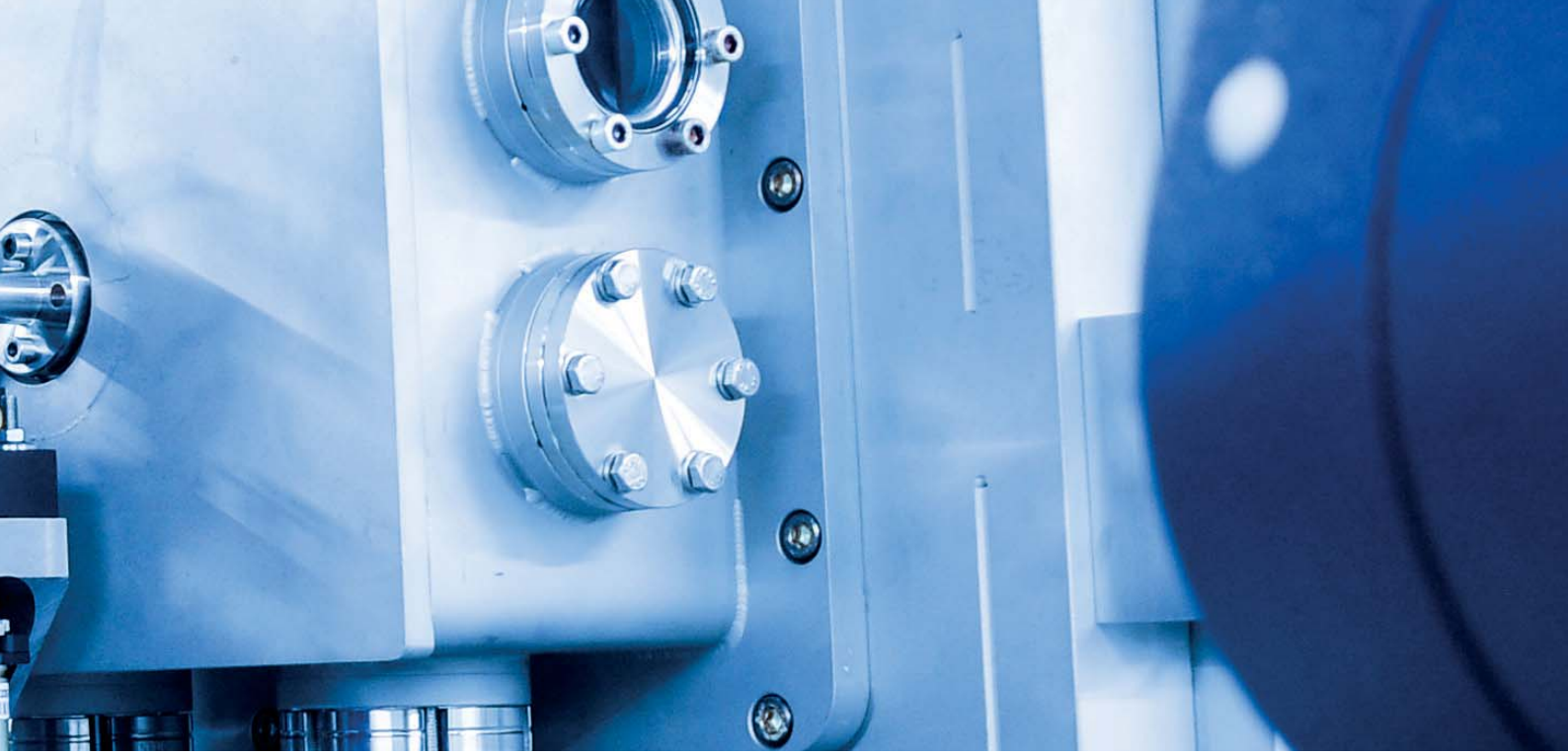
- High quantum efficiency, up to 100 keV
- No image lag or afterglow
- Count rate capability 10^7 photons/s/pixel
- Two energy discriminating thresholds
- Gateable detection for pump & probe experiments
- Large active area

Applications

- X-ray diffraction (single crystal & powder)
- *In-situ* and *in operando* techniques
- Diffraction microscopy and tomography
- Diffuse scattering & pair distribution function



Measured and simulated quantum efficiency (QE) as a function of X-ray energy.

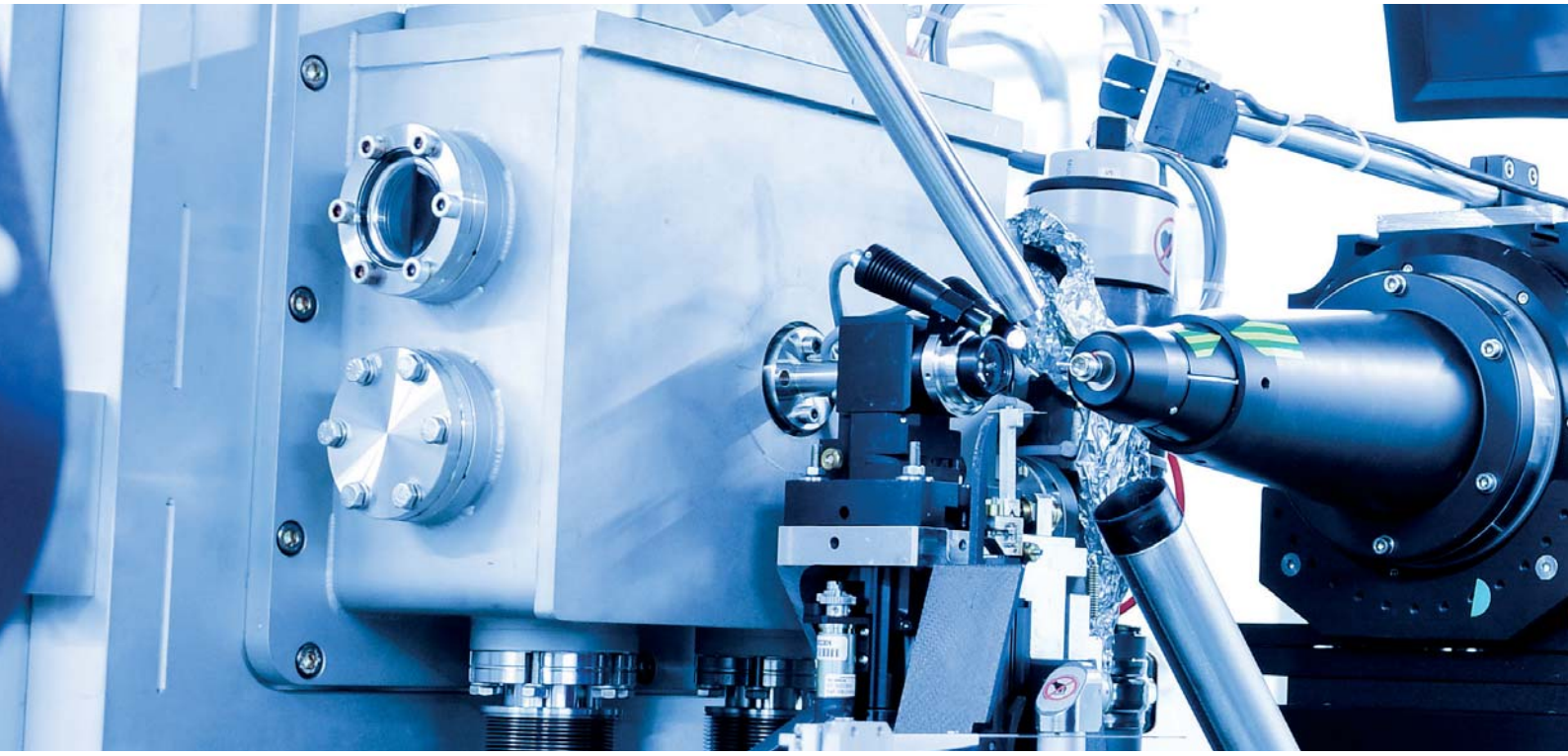


Technical specifications

EIGER2 X CdTe	500K	1M	4M	9M	16M
Number of detector modules	1	1 × 2	2 × 4	3 × 6	4 × 8
Sensitive area, width × height [mm²]	77.2 x 38.6	77.2 × 79.9	155.2 × 162.5	233.2 × 245.2	311.2 × 327.8
Pixel size [µm²]	75 × 75				
Energy discriminating thresholds	2				
Count rate capability [photons/s/pixel]	10^7				
Point-spread function [pixel]	1				
CdTe sensor thickness [µm]	750				
Data format	HDF5 / NeXus				
Frame rate [Hz]	2000	2000	500	230	130
Dimensions (WHD) [mm³]	114 x 92 x 242	114 × 133 × 240	235 × 237 × 372	340 × 370 × 500	400 × 430 × 500
Weight [kg]	3.3	3.9	15	41	55

All specifications are subject to change without notice.





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