



The new LYNXEYE Family

- The highest performance detectors for XRD

The detectors of the new LYNXEYE family are the world's highest performing compound silicon strip detectors, suitable for all X-ray diffraction and scattering applications. Unique to these detectors is the combination of outstanding technical specifications, manufacturing quality, as well as system and software integration. The result is a level of both versatility and data quality which is not available with any other present detector system on the market.

Both the new SSD160-2 and the new LYNXEYE-2 are now based on the unique LYNXEYE XE-T technology. As a consequence both have gained largely extended feature sets and thus application ranges, only available with the LYNXEYE XE-T until recently.

- One detector for all applications
- 0-D, 1-D, and 2-D diffraction
- High-speed data acquisition up to 450 times faster than a conventional point detector system
- Superior energy resolution providing for superior filtering of sample fluorescence
- Operation with all common characteristic X-ray emission lines: Cr, Co, Cu, Mo, and Ag radiation
- Fully radiation-hard
- Outstanding angular resolution (peak widths) and perfect line profiles
- Outstanding peak-to-background ratio for highest sensitivity and data quality
- Compatible with all current Bruker diffractometers (D2 PHASER, D8 family)

Key specifications	SSD160-2	LYNXEYE-2	LYNXEYE XE-T
Nr. of channels ¹⁾	160 (up to 2400)	192 (up to 2880)	192 (up to 2880)
Active window	12 x 16 mm	14.4 x 16 mm	14.4 x 16 mm
Speed gain	125 ²⁾	150 ²⁾	150 ²⁾ / 450 ³⁾
Angular coverage ⁴⁾	~2.5° 2 θ	~3° 2 θ	~3° 2 θ
Spatial resolution	75 μ m	75 μ m	75 μ m
Energy resolution ⁵⁾	<1000 eV (426 eV)	<1000 eV (426 eV)	<380 eV (<160 eV)
Maximum global count rate	~125,000,000 cps	~150,000,000 cps	~150,000,000 cps
Background noise	<0.05 c/s for the whole detector		
Wavelengths	Cr, Co, Cu, Mo, and Ag One detector for all energies: Absolutely radiation hard		
Sensor thickness	500 μ m		
Sensor efficiency	>99% for Cr, Co, Cu; ~50% for Mo; ~30% for Ag		
Nr. of defective channels	max. 1	0 ⁶⁾	0 ⁶⁾

¹⁾ Channels (subchannels)

²⁾ High-intensity mode

³⁾ High-energy resolution mode

⁴⁾ @ 250 mm goniometer radius

⁵⁾ @ ~8keV: FWHM(σ)

⁶⁾ All strips guaranteed to work at delivery time

Common Key features		
SSD160-2	LYNXEYE-2	LYNXEYE XE-T
0D, 1D, and 2D diffraction:		
X-Ray Powder Diffraction (XRPD) data, Pair-Distribution Function (PDF) data		
Superb filtering of fluorescence		
All detectors can be turned 90° with optional 0°/90°mount ¹⁾		
Variable Detector Opening (VDO) fully supporting Dynamic Beam Optimization (DBO)		
Bragg2D - 2-D data collection in Bragg-Brentano line focus geometry		
Fully supported by DAVINCI.DESIGN component recognition: Detector model, orientation (0°/90°), Soller slits, K β filters, absorbers		
Modi of operation:		
Scanning 1-D mode for fast 1-D data collection		
Scanning 2-D mode for 2-D data collection ¹⁾		
Fixed 1-D mode measurements for ultra-fast measurements		
Fixed 1-D mode measurements and turned by 90° for ultra-fast non-coplanar measurements ¹⁾		
0-D ("point detector") mode for high-resolution parallel-beam geometry		
0-D mode and turned by 90° to cover an extremely large dynamic range ¹⁾		

¹⁾ Requires optional 0°/90°mount, only available for the D8 ADVANCE and D8 DISCOVER diffractometer families.

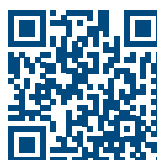
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