

rayonix

High-performance X-ray technology

rayonix mx series

Seamless multi-element
CCD X-ray detectors



Technical Specifications		mx225	mx300	mx325		
Type	Multiple CCDs; tiled fiber-optic tapers	9 CCDs; 9 tapers	16 CCDs; 16 tapers	16 CCDs; 16 tapers		
X-ray Sensitive Surface		225mm × 225mm (50,625mm ²)	300mm × 300mm (90,000mm ²)	325mm × 325mm (105,625mm ²)		
Detective Quantum Efficiency	Up to 0.8 for 8keV to 12keV X-rays	•	•	•		
Point Spread Function	FWHM = 100µm	•	•	•		
Gain		6 e-/12keV photon	6 e-/12keV photon	5 e-/12keV photon		
Read Noise*	10 e-/pixel	•	•	•		
Dark Current*	<0.01 e-/pixel/sec.	•	•	•		
Full Well Capacity*	360k e-/pixel	60k 12keV photons	60k 12keV photons	72k 12keV photons		
Dynamic Range	16 bits	•	•	•		
Fiber-optic Tapers		2.7:1	2.7:1	2.9:1		
CCDs	31mm × 31mm; 2048 × 2048 15µm pixels	9 CCDs	16 CCDs	16 CCDs		
CCD Operating Temperature	-80° C	•	•	•		
Cooling	Closed-cycle refrigeration	•	•	•		
Readout Electronics	2 channels per CCD	18-channel readout	32-channel readout	32-channel readout		
Readout Options (Software Selectable):	On-chip Binning	Readout Time	Number of Pixels in Image (Pixel Size)			
	Standard Mode	2 × 2	1.0 sec.	3072 × 3072 (73µm)	4096 × 4096 (73µm)	4096 × 4096 (79µm)
		3 × 3	0.5 sec.	2046 × 2046 (110µm)	2728 × 2728 (110µm)	2728 × 2728 (119µm)
		4 × 4	0.3 sec.	1536 × 1536 (146µm)	2048 × 2048 (146µm)	2048 × 2048 (158µm)
Computer Interface	PCI DMA; single fiber-optic cable	•	•	•		
Physical Dimensions:						
Detector Head	Height × Width × Depth	46cm × 32cm × 40cm	58cm × 42cm × 43cm	58cm × 42cm × 43cm		
	Approximate Weight	52kg	115kg	125kg		
Electronics/ Cooling Assembly	Height × Width × Depth	175cm × 64cm × 64cm	175cm × 64cm × 64cm (x2)	175cm × 64cm × 64cm (x2)		
	Approximate Weight	215kg	215kg (x2)	215kg (x2)		

*Specified for standard readout mode



mx325/mx300



mx225

Additional Options:

- Custom phosphor
- High resolution calibration (1x1 binning)
- Baseline stabilization



High Efficiency models available
High electro-optical gain design

www.rayonix.com

1880 Oak Avenue
Evanston, IL 60201 USA
info@rayonix.com

Tel: +1 (847) 869-1548
Fax: +1 (847) 869-1587
Toll Free in USA: (877) 627-XRAY