SPECIFICATIONS

	PIXIS: 512B_eXcelon	PIXIS: 512B
Features	Back-illuminated CCD. Highest sensitivity in the visible region. High sensivity in the NIR. Extremely low etaloning. 100x lower dark charge than the BR.	Back-illuminated CCD. Highest sensitivity in the visible region.
CCD Image Sensor	Princeton Instruments' proprietary CCD, back-illuminated, grade 1, AIMO	e2v CCD77-00 back-illuminated, grade 1, AIMO
Dark current @ -70°C	0.001 e-/p/sec (typical) 0.003 e-/p/sec (max)	0.001 e-/p/sec (typical) 0.003 e-/p/sec (max)
CCD UV coating	Optional UV coating (not needed for BUV version)	
Quantum efficiency	See graph, next page	
CCD format	512 x 512 imaging pixels; 24 x 24 µm pixels; 100% fill factor	
Imaging area	12.3 mm x 12.3 mm (optically centered)	
Lens mount	Adjustable c-mount with integral 25 mm shutter	
Deepest cooling temperature	-90°C typical; -70°C guaranteed, specified at ambient temperature of +20°C	
Thermostating precision	±0.05°C	
Cooling method	Thermoelectric air or liquid cooling (CoolCUBE II required)	
Full well: Single pixel Output node	300 ke- (typical), 250 ke- (min) 700 ke- (typical), 600 ke- (min)	
ADC speed/bits	100 kHz/16-bit and 2 MHz/16-bit	
System read noise @ 100 kHz @ 2 MHz	 5 e- rms (typical), 9 e- rms (max) 12 e- rms (typical), 20 e- rms (max)	
Vertical shift speed	18 µsec/row (programmable)	
Non-linearity	<1% @ 100 kHz	
Software selectable gains	2.5, 5, 10 e-/ADU; available at all speeds	
Operating systems supported	Windows XP/Vista/7, and Linux	
Data interface	USB2.0 (5 M interface cable provided); Optional Fiberoptic interface is available for remote operation	
I/O signals	Two MCX connectors for programmable frame readout, shutter, trigger in	
Operating environment	+5 to +30°C non-condensing	
Certification	CE	
Dimensions / Weight	16.59 cm (6.53") x 11.81 cm (4.65") x 11.38 cm (4.48") (L x W x H) / 2.27 kg (5 lbs)	

All specifications are subject to change.

FRAME RATE

Binning	Readout Time @ 2 MHz	Readout Time @ 100 kHz
1 x 1	152.1 msec	2.52 sec
2 x 2	77.4 msec	0.7 sec
4 x 4	41.6 msec	219.3 sec