SPECIFICATIONS

	PIXIS: 1024BR_eXcelon	PIXIS: 1024BR	PIXIS: 1024B_eXcelon	PIXIS: 1024B/BUV	PIXIS: 1024F
Features	Back-illuminated, deep depletion CCD with eXcelon technology. Highest QE in the UV and the NIR. No etaloning.	Back-illuminated, deep depletion CCD. High QE in the NIR and no etaloning.	Back-illuminated CCD with eXcelon technology. Highest QE in the visible and high QE in the NIR. Extremely low etaloning. 5x - 100x lower dark charge than the BR.	Back-illuminated CCD. Highest sensitivity in the visible region. Special BUV version offers the highest sensivity in the UV region.	Front-illuminated CCD. Affordable technology for moderate light level applications. No etaloning.
CCD Image Sensor	Princeton Instruments' proprietary CCD with eXcelon technology, grade 1, NIMO	e2v CCD47-10 back-illuminated deep depletion, grade 1, NIMO	Princeton Instruments' proprietary CCD with eXcelon technology., grade 1, AIMO	e2v CCD47-10 back-illuminated, grade 1, AIMO	e2v CCD47-10 front-illuminated, grade 1, AIMO
Dark current @ -70°C (e-/p/sec)	0.02 (typical) 0.07 (max)	0.02 (typical) 0.07 (max)	0.0004 (typical) 0.001 (max)	0.0004 (typical) 0.001 (max)	0.0002 (typical) 0.0007 (max)

CCD UV coating	Optional UV coating (not needed for BUV version)
CCD format	1024 x 1024 imaging pixels; 13 x 13 µm pixels; 100% fill factor
Imaging area	13.3 x 13.3 mm (optically centered)
Lens mount	Adjustable C-mount with integral 25mm shutter; spectrometer adapter available
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 liquid circulator available)
Full well: Single pixel Output node	100 ke- (typical), 60 ke- (min) 250 ke- (typical), 220 ke- (min)
ADC speed/bits	100kHz/16-bit and 2MHz/16-bit
System read noise @100 kHz @2 MHz	3.0 e- rms (typical), 5 e- rms (max) 9.0 e- rms (typical), 15 e- rms (max)
Vertical shift speed	< 3.2 µsec/row to18 µsec/row (programmable)
Non-linearity	<1% @ 100 kHz
Software selectable gains	1, 2, 4 e-/ADU (typical); available at all speeds
Operating systems supported	Windows XP/7 (32-bit), Windows 7 (64-bit) and Linux
Data interface	USB2.0 (5m 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 subject to change

FRAME RATE

Binning	Readout Time @ 2 MHz	Readout Time @ 100 kHz
1 x 1	0.58 sec	10.0 sec
2 x 2	0.28 sec	2.8 sec
8 x 8	0.14 sec	0.85 sec