PIXIS 2K CCD CAMERA

KEY FEATURES

- 2048 x 512 format sensor for spectroscopy
- Balanced 13.5 µm pixels to maximize sensitivity
- eXcelon® technology for sensitivity across UV and NIR
- Thermoelectric cooling down to -75 °C for low dark current
- Acquisition rates of up to 2 MHz
- Permanent vacuum seal
- Dual amplifiers with software selectable gains
- Optional UV phosphor coatings
- Optional AR coating and wedge windows are available

TYPICAL APPLICATIONS

- Raman spectroscopy
- Single-molecule spectroscopy
- Absorbance spectroscopy
- Emission spectroscopy
- Fluorescence spectroscopy
- Reflectance spectroscopy

RELIABILITY

- One-year warranty
- Lifetime vacuum guarantee

High-Performance, Low-Noise CCDs

The PIXIS camera family are fully integrated, low noise CCD cameras with deep cooling for quantitative scientific imaging and spectroscopy applications from UV to NIR. High quantum efficiency and ultra-low-noise electronics make PIXIS cameras highly sensitivity and ideal for demanding low-light applications.

The model is the PIXIS 2K CCD, featuring a 2048 x 512 sensor format and balanced 13.5 µm pixels, optimized for sensitive spectroscopy research. The PIXIS 2K offers thermoelectric cooling down to -75 °C, an all-metal hermetically sealed design (with lifetime vacuum guarantee), and exclusive eXcelon® technology for increased sensitivity from UV to NIR with reduced etaloning.

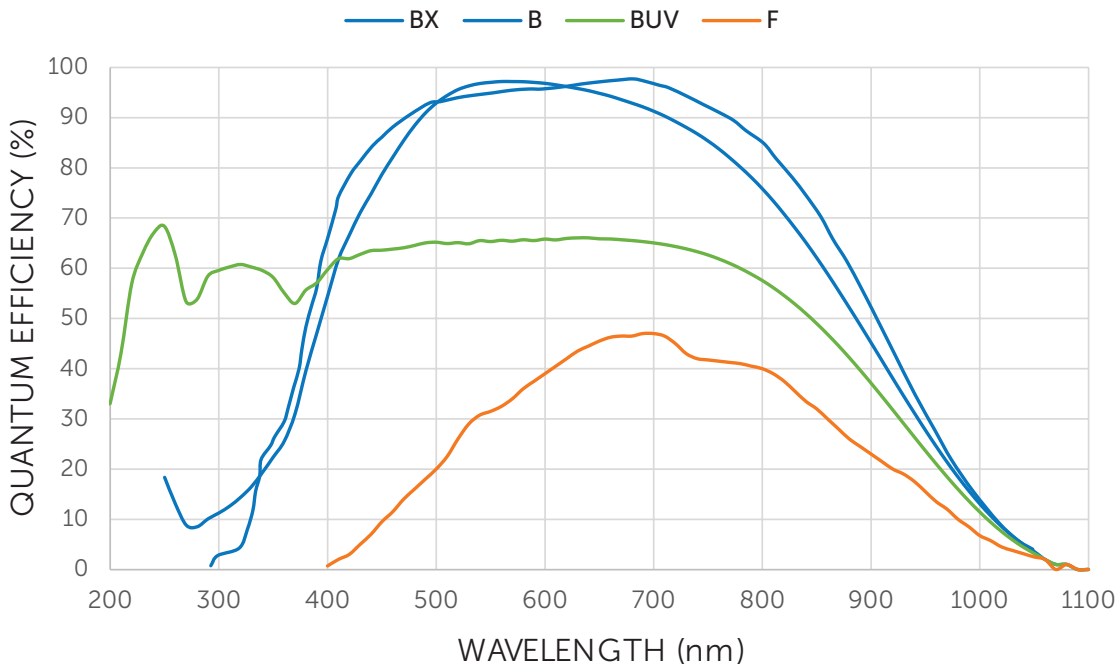
PIXIS 2K SPECIFICATIONS

SPECIFICATIONS	PIXIS 100	PIXIS 400
CCD Sensor Format	**B**: Back-illuminated (highest QE in visible, subject to NIR etaloning, optional UV coating) **BX**: Back-illuminated, with eXcelon (high QE from UV-NIR with low etaloning) **BUV**: Back-illuminated (highest sensitivity in UV, subject to NIR etaloning) **F**: Front-illuminated (moderate QE, no etaloning, optional UV coating)	
Active Array Size	2048 x 512 pixels	
Pixel Area	13.5 µm x 13.5 µm (182.25 μm^2)	
Sensor Area	27.6 mm (W) x 6.9 mm (H) (optically centered)	
Spectral Response	120 – 1100 nm	
Spectrometric Well Capacity	250,000 e^- (High Sensitivity); 750,000 e^- (High Capacity)	
ADC Rates	2 MHz, 100 kHz	
Analog Gain (typical)	1.5, 3, 6 e^-/ADU (High Sensitivity); 3, 6, 12 e^-/ADU (High Capacity) (available at all ADC rates)	
Non-linearity	< 1.0% @ 100 kHz	
I/O Signals	Two MCX to BNC connectors for programmable frame readout, shutter, trigger in	
Typical System Readout Noise (RMS)	3.5 e^- @ 100 kHz; 14.0 e^- @ 2 MHz	
Typical Dark Current	0.001 e^-/p/s @ -80 °C	
Cooling Options	Thermoelectric air or liquid cooling (optional CoolCUBE II coolant circulator available) -75 °C	
Thermostating Precision	± 0.05 °C across temperature range	
Vertical Shift Times	< 15.2 µsec/row (programmable)	
Output Interface	USB 2.0	
Digitization	16-bit	
Operating Temperature Range	5 °C to 30 °C (non-condensing)	
Camera Weight	5 lbs, 2.27 kg	
Camera Dimensions	163 x 118 x 114 mm (L x W x H)	
Optical Mount	Teledyne Princeton Instruments' Acton spectrometer adapter with optional shutter	
Certification	CE	

PIXIS 2K SPEED TABLES

SPECIFICATIONS	PIXIS 2K
@100 kHz Full Vertical Bin	35 spectra/sec
@2 MHz Full Vertical Bin	90 spectra/sec

PIXIS 2K QE CURVES

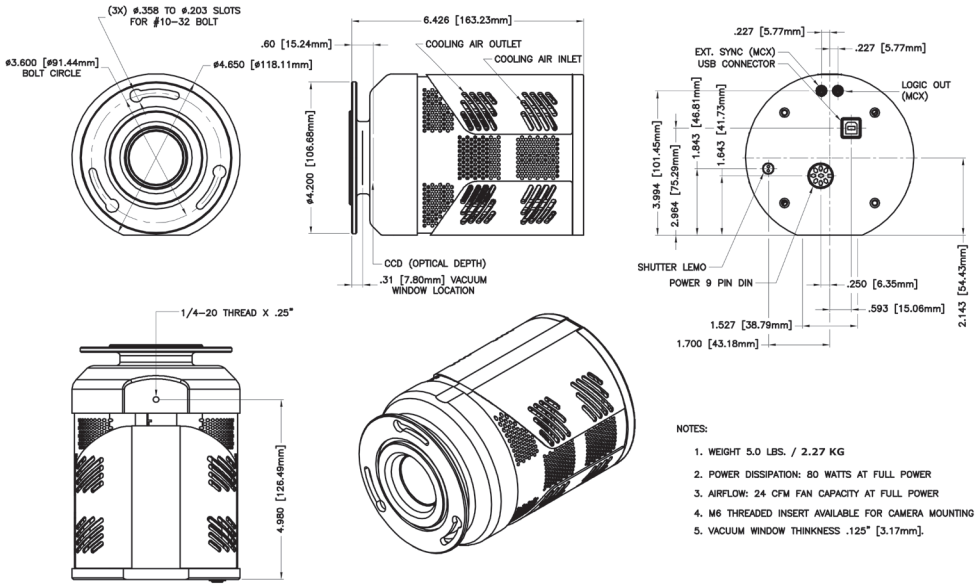


Enhanced UV version available upon special request

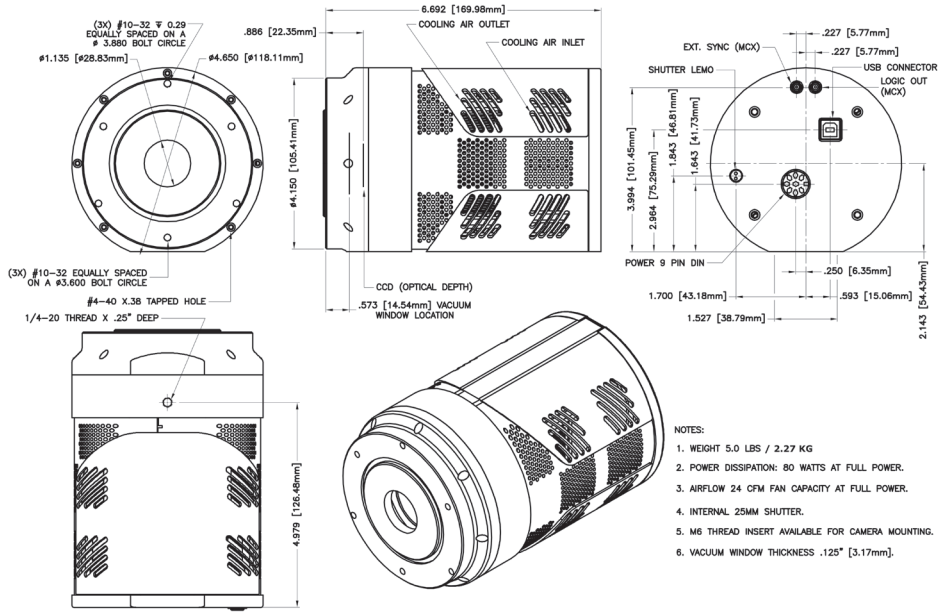
PIXIS 2K ACCESSORIES

Accessories (Air Cooled)	Accessories (Liquid Cooled)	Accessories (Optional)
MCX to BNC cables (x2)	MCX to BNC cables (x2)	WinX application software
USB 2.0 interface cable	USB 2.0 interface cable	LightField® application software
Certificate of Performance	Certificate of Performance	SITK™ for LabVIEW
Power supply (120V/240V)/cables	Power supply (120V/240V)/cables	Internal 25 mm or 45 mm shutter
	CoolCUBEII liquid circulator with hoses	Fiber optic extender kit

PIXIS 2K DIMENSIONAL OUTLINES — SPECTROMETER MOUNT (UNITS: INCHES [MM])



PIXIS 2K DIMENSIONAL OUTLINES — SPECTROMETER MOUNT WITH SHUTTER (UNITS: INCHES [MM])



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