PIXIS 256 CCD CAMERA

KEY FEATURES

- 1024 x 256 format sensor for spectroscopy
- Huge 26 µm pixels to maximize sensitivity
- Open electrode or deep depleted sensor architecturers
- Thermoelectric cooling down to -75 °C for low dark current
- Acquisition rates of up to 2 MHz
- Permanent vacuum seal
- Extremely low bin noise
- Dual-digitizer option
- Optional UV phosphor coatings

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 256 CCD, featuring a 1024 x 256 sensor format and huge 26 µm pixels, optimized for sensitive spectroscopy research. The PIXIS 256 offers thermoelectric cooling down to -70 °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.

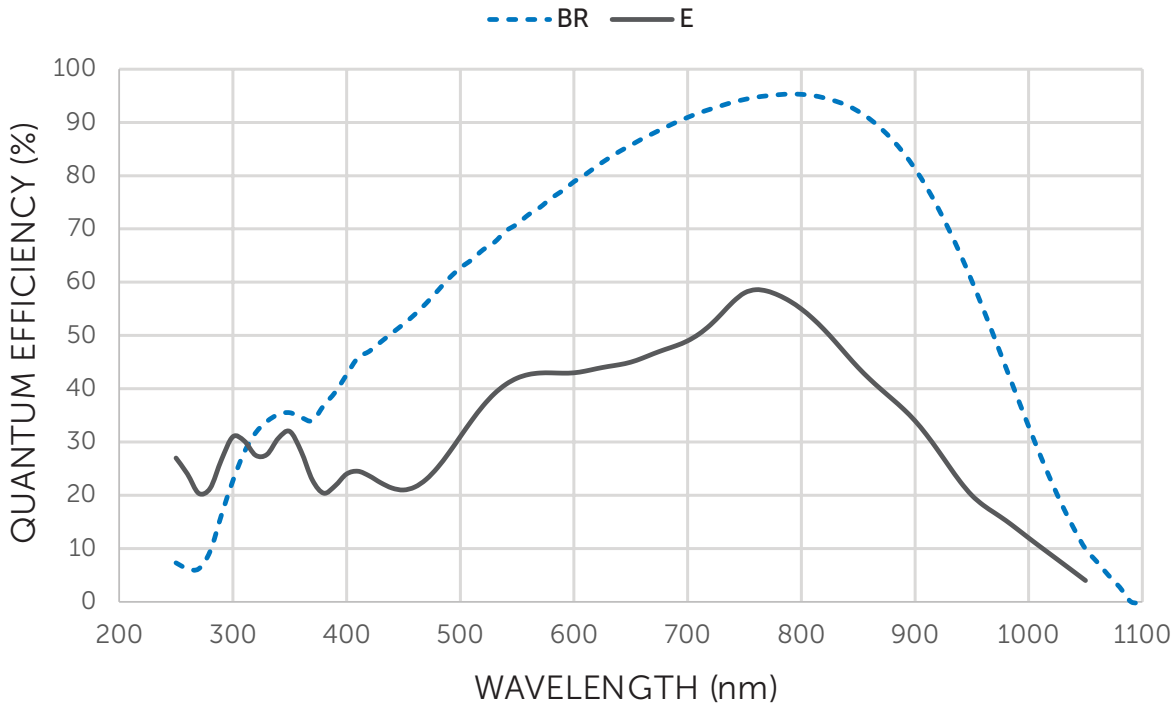
PIXIS 256 SPECIFICATIONS

SPECIFICATIONS	PIXIS 256 BR	PIXIS 256 E
CCD Sensor Format	Teledyne e2v CCD30-11, scientific grade 1, back-illuminated, deep-depleted (high QE in NIR with minimal etaloning, optional UV coating)	Teledyne e2v CCD30-11, scientific grade 1, front-illuminated, open electrode (improved QE over typical front-illuminated devices, no etaloning)
Active Array Size	1024 x 256 pixels	1024 x 256 pixels
Pixel Area	26 µm x 26 µm (676 μm^2)	
Sensor Area	26 mm (W) x 6.7 mm (H) (optically centered)	
Spectral Response	250 – 1100 nm	
Spectrometric Well Capacity	500,000 e^-	300,000 e^-
ADC Rates	2 MHz, 100 kHz	
Analog Gain (typical)	3, 6, 12 e^-/ADU (available at all ADC rates)	
Non-linearity	< 1.0% @ 100 kHz < 2.0% @ 2 MHz	
I/O Signals	Two MCX to BNC connectors for programmable frame readout, shutter, trigger in	
Typical System Readout Modes	6.0 e^- @ 100 kHz; 22.0 e^- @ 2 MHz	
Typical Dark Current	0.3 e-/p/s @ -75 °C	0.003 e-/p/s @ -75 °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 µsec/row (programmable)	< 30 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 256 SPECTRAL RATES

SPECIFICATIONS	PIXIS 256 BR	PIXIS 256 E
@100 kHz Full Vertical Bin	65 spectra/sec	52 spectra/sec
@2 MHz Full Vertical Bin	190 spectra/sec	118 spectra/sec

PIXIS 256 QE CURVES

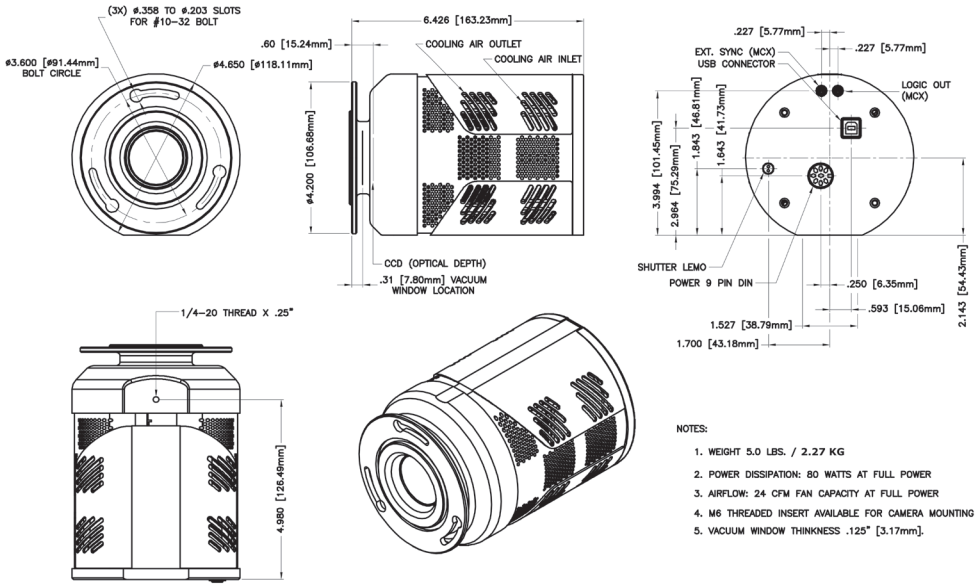


Enhanced UV version available upon special request

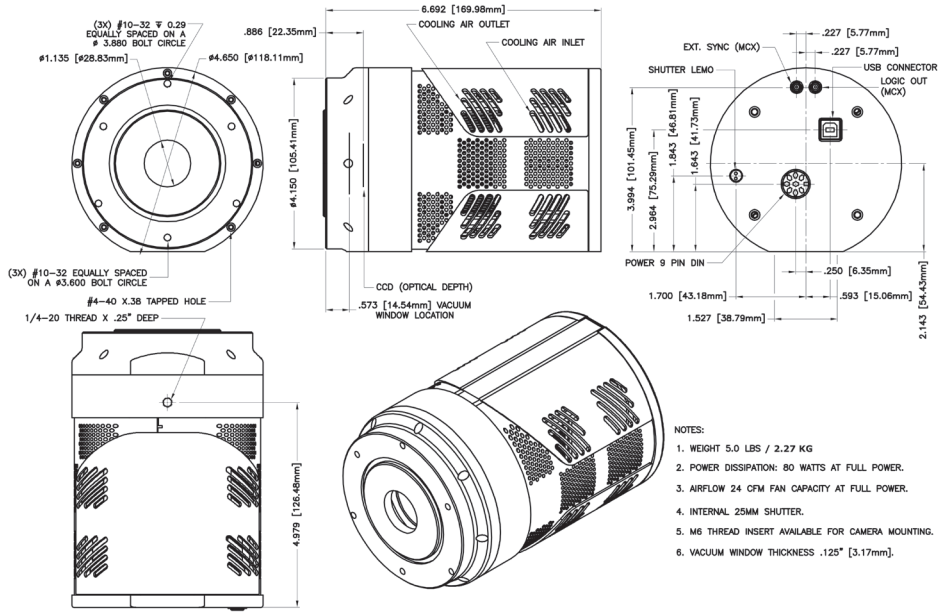
PIXIS 256 ACCESSORIES

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 256 DIMENSIONAL OUTLINES — SPECTROMETER MOUNT (UNITS: INCHES [MM])



PIXIS 256 DIMENSIONAL OUTLINES — SPECTROMETER MOUNT WITH SHUTTER (UNITS: INCHES [MM])



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