

RETIGA E20 CMOS CAMERA

KEY FEATURES

- Long exposure CMOS, capable of exposures up to an hour
- Ultra-low dark current due to advanced thermal control
- High-resolution 20 MP sensor
- Ultra-small 2.4 μm pixels
- 22 fps
- Extended dynamic range to capture intense signals
- 83% quantum efficiency

TYPICAL APPLICATIONS

- Live cell imaging
- Gel documentation
- Spatial biology
- Luminescence
- Multispectral imaging
- Micro-plate readers
- Fluorescence microscopy

RELIABILITY

- Three-year warranty
- Extended warranty available

Low Noise, High Pixel Count, CMOS Camera for Integration

The Retiga E series of CMOS cameras bring long exposure imaging into the CMOS era, featuring major breakthroughs in thermal noise control that allows for exposures of over an hour. Alongside this, Retiga E CMOS cameras have high pixel count sensors capable of high-speed imaging, and are optimized for OEM integration.

The Retiga E20 combines our smallest-ever 2.4 μm pixel with a 20-megapixel sensor, allowing for high-resolution imaging even at the lowest magnifications. The Retiga E20 camera features both long-exposure and high-speed imaging modes, as well as options for Extended Dynamic Range.



RETIGA E20 SPECIFICATIONS

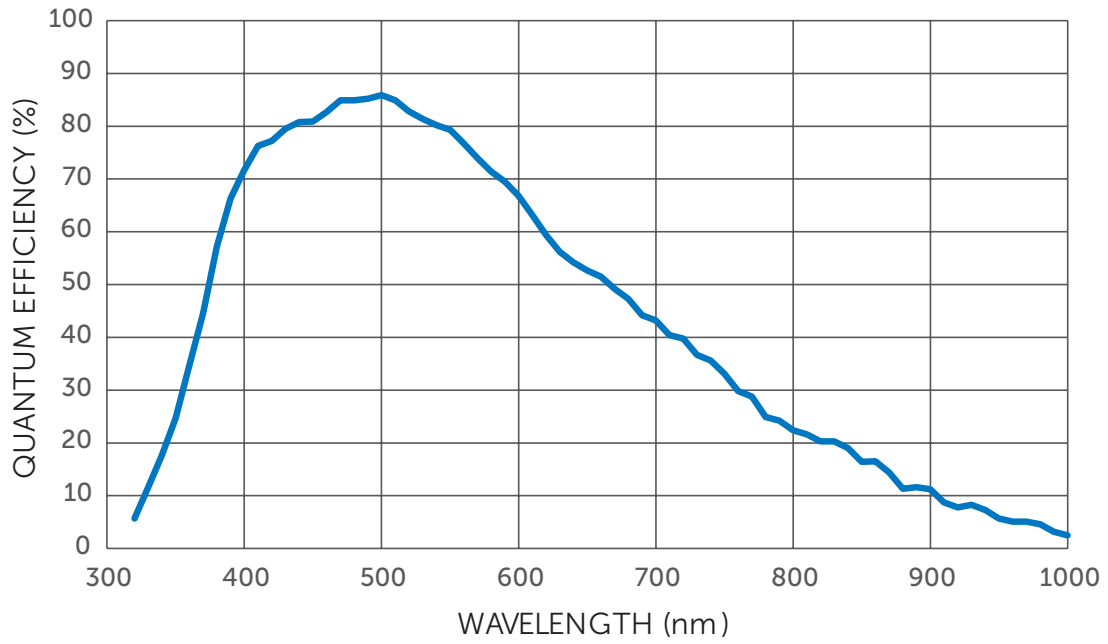
SPECIFICATIONS	Camera Performance
Sensor	Sony IMX183 CMOS sensor
Active Array Size	5472 x 3648 (20 Megapixel)
Pixel Area	2.4 μm x 2.4 μm (5.76 μm^2)
Sensor Area	13.1 mm x 8.7 mm (15.7 mm diagonal)
Peak QE%	> 85%
Readout Modes	Rolling shutter
Digital Binning	Up to 4 x 4 digital binning
Linearity	> 99%
Cooling Options	Air cooled (-25 °C @ 30 °C ambient, 0.001 e ⁻ /pixel/second dark current)
Digital Interfaces	USB 10 Gbps (3.2 Gen 2)
Lens Interfaces	C-mount
Mounting Points	4 x 1/4"-20 UNC
Camera Weight	0.8 kg, 1.76 lbs

CAMERA MODES

SPECIFICATIONS	Speed	Standard	Extended Dynamic Range (EDR)
Bit Depth	12-bit	12-bit	16-bit
Frame Rate (Full Frame)	22 fps	1.5 fps	0.7 fps*
Read Noise	2.1 e ⁻	2.1 e ⁻	2.1 e ⁻
Cooling	-25 °C	-25 °C	-25 °C
Line Time	12.46 $\mu\text{sec}/\text{line}$	182.74 $\mu\text{sec}/\text{line}$	182.74 $\mu\text{sec}/\text{line}$
Maximum exposure time	120 seconds	60 minutes	60 minutes*
Conversion Gain	0.1 e ⁻ /p/sec	0.003 e ⁻ /p/sec	0.003 e ⁻ /p/sec
Full Well Capacity	1,200 e ⁻	10,000 e ⁻	10,000 e ⁻
Gain	2.4 e ⁻ /gray	2.4 e ⁻ /gray	0.15 e ⁻ /gray

*EDR combines two exposures of equal time, but different gain modes. Setting the exposure to 60 minutes will take 120 minutes of acquisition

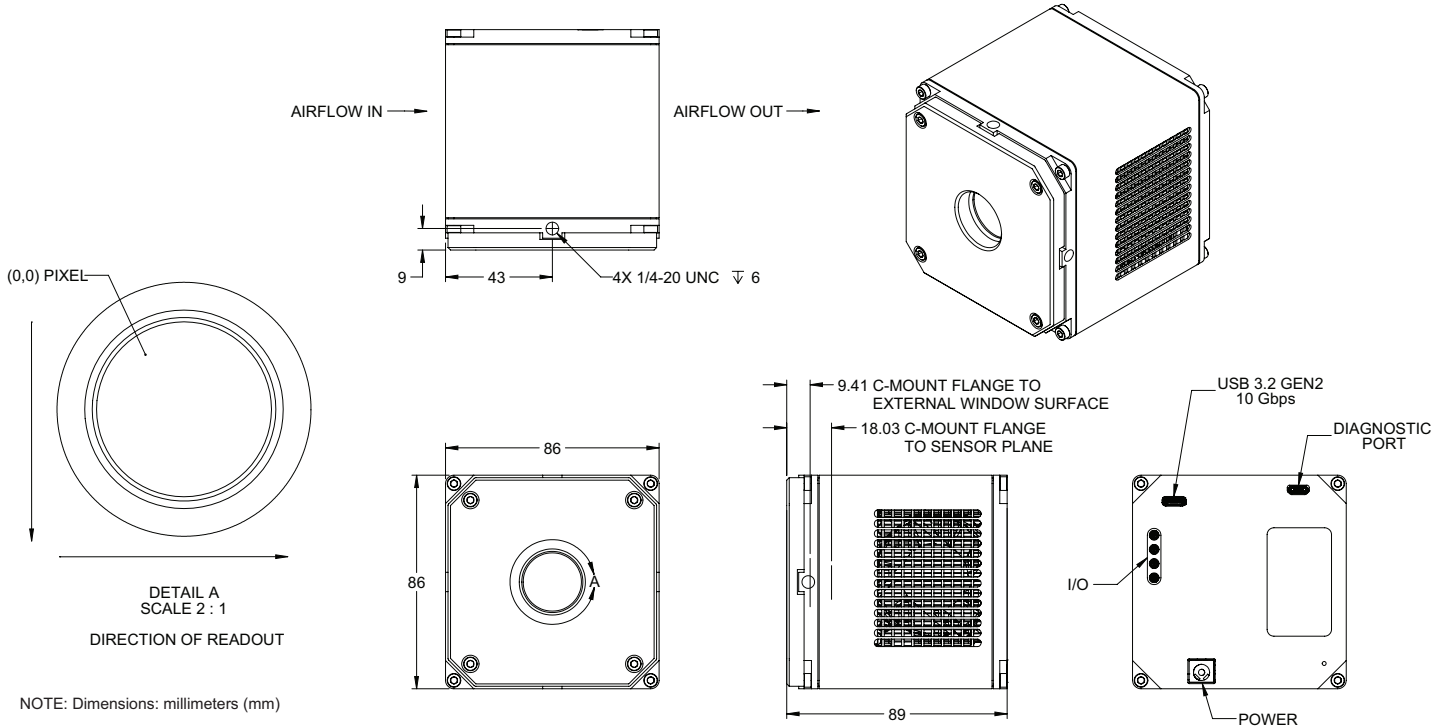
RETIGA E20 QE CURVE



RETIGA E20 SPEED TABLE

FRAME RATES (HZ)	
MODE	STANDARD
Speed	22
Long Exposure	1.5
EDR	0.7

RETIGA E20 DIMENSIONAL OUTLINES (UNIT: MM)



RETIGA E20 ACCESSORIES

ACCESSORIES (INCLUDED)		
USB 10 Gbps interface card	Power supply (12V/10A DC)	PVCAM installation USB
USB A-C data cable, 0.9 m	Quick installation guide	
Mini-BNC trigger cable	Performance and gain test data	



FOR MORE INFORMATION REACH OUT ONLINE:

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