RETIGA E7 CMOS CAMERA

KEY FEATURES

- Long exposure CMOS, capable of exposures up to an hour
- Ultra-low dark current with advanced thermal control
- 50 fps imaging speed
- High resolution 7 MP sensor
- Small 4.5 µm pixels
- True global shutter
- Extended dynamic range mode
- Hybrid binning, double speed with a 2x2 bin, unlike other CMOS

TYPICAL APPLICATIONS

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

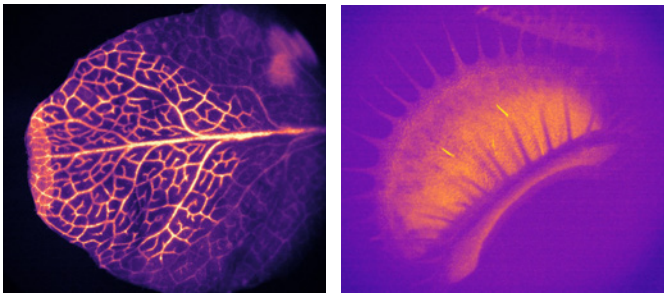
RELIABILITY

- Three-year warranty
- Extended warranty available

Low Noise and 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 E7 camera is capable of long exposure or high speed imaging, features a true global shutter, and is designed for OEM integration. Featuring hybrid binning and Extended Dynamic Range (EDR) mode, the Retiga E7 is simple, powerful, and easy to use.



Plant Calcium Imaging
Prof. Rob Roelfsema

RETIGA E7 SPECIFICATIONS

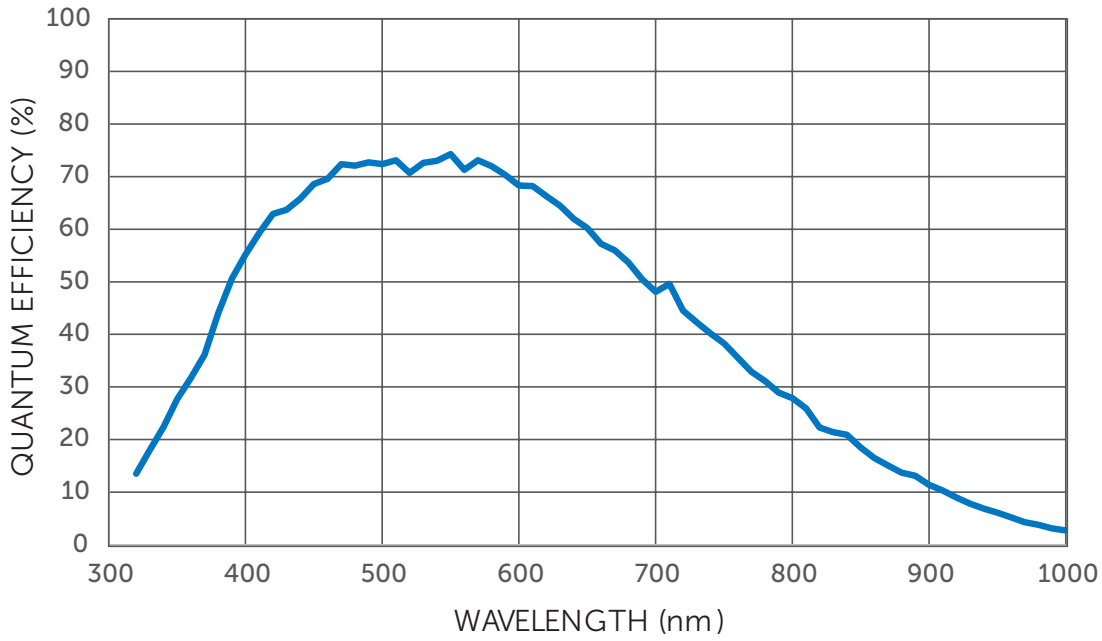
SPECIFICATIONS	Camera Performance
Sensor	Sony IMX420 CMOS sensor
Active Array Size	3200 x 2200 (7.1 megapixel)
Pixel Area	4.5 µm x 4.5 µm (20.25 μm^2)
Sensor Area	14.4 mm x 10 mm (17.6 mm diagonal)
Peak QE%	73%
Readout Modes	Global shutter
Digital Binning	2 x 1 charge domain (on chip) binning up to 4 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	Long Exposure	Extended Dynamic Range (EDR)
Maximum exposure time	120 seconds	60 minutes	60 minutes*
Bit Depth	12-bit	12-bit	16-bit
Frame Rate (Full Frame)	51 fps	3.2 fps	1.6 fps
Read Noise	2.1 e^-	2.1 e^-	1.6 e^-
Cooling	0 °C	0 °C	0 °C
Line Time	8.62 µsec/line	137.92 µsec/line	137.92 µsec/line
Dark Current	0.1 e^-/p/sec	0.001 e^-/p/sec	0.001 e^-/p/sec
Conversation Gain	2.1 e^-/count	2.1 e^-/count	0.35 e^-/count
Full Well Capacity	23000 e^-	23000 e^-	23000 e^-

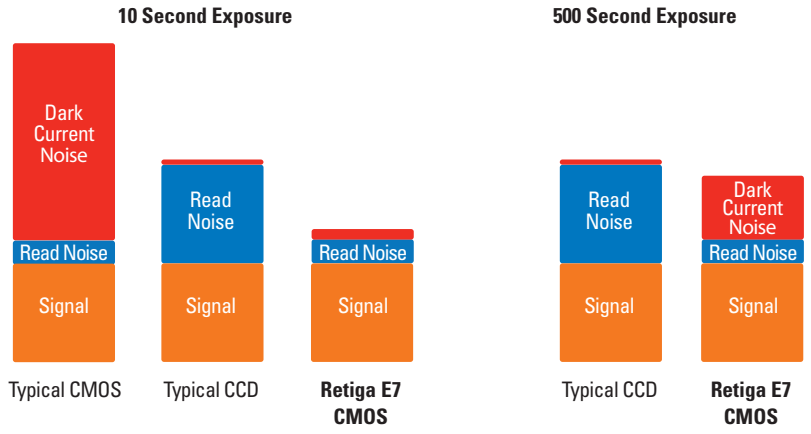
*EDR combines two exposures of equal time, but different gain modes. Setting the exposure to 60 minutes will take 120 minutes of acquisition

RETIGA E7 QE CURVE

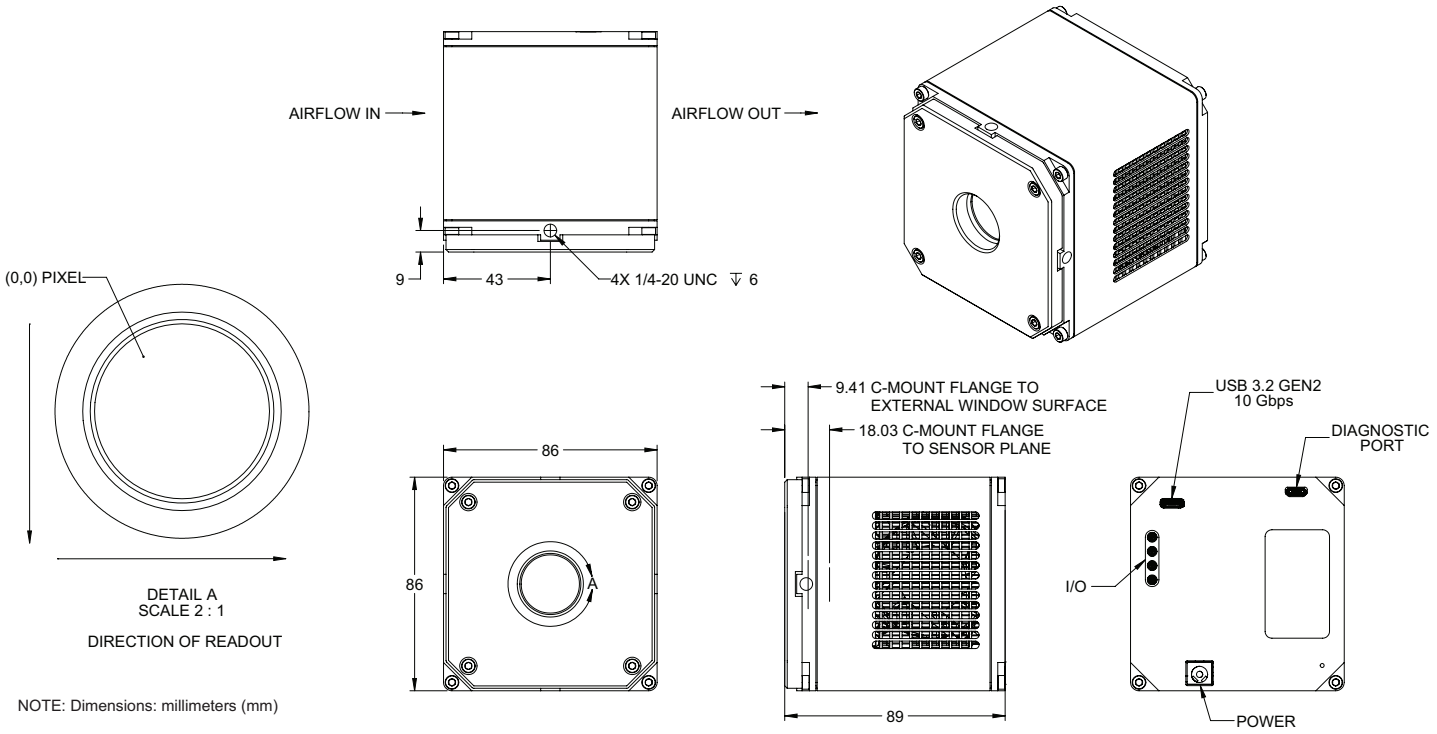


RETIGA E7 SPEED TABLE

FRAME RATES (HZ)		
MODE	STANDARD	2x2 BINNED
Speed	51	102
Long Exposure	3.1	6.2
EDR	1.5	3



RETIGA E7 DIMENSIONAL OUTLINES (UNIT: MM)



RETIGA E7 ACCESSORIES

ACCESSORIES (INCLUDED)	
USB 3.2gen2 10Gbs interface card	Power supply (12V/10A DC)
USB 3.2gen2 10Gbs A-C 0.9 m	PVCAM drivers/software
USB 3.2gen2 10Gbs C-C 3 m	Quick installation guide
Mini-BNC trigger cable	Performance and gain test data

FOR MORE INFORMATION REACH OUT ONLINE:

CONTACT US: photometrics.com/contact
FOR OEM INQUIRIES: photometrics.com/oem-page
CONTACT SUPPORT: photometrics.com/contact/support

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