E9

RETIGA

RETIGA™ E9 CMOS Cameras

LONG EXPOSURE OPTIMIZED CMOS CAMERA

» **Exposures to 60 minutes with dark current of < 0.001 e⁻/p/s**

» **Superior image quality with the speed of CMOS**

» **High Dynamic range (82 dB) and high QE (>90%)**

» **Rolling shutter**

» **Industry-leading chamber sealing technology**

» **Compact form factor for easy integration**

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Scientific Imaging

Features

Sensor	CMOS sensor Sony IMX533
Array Size	3001 x 3001 (9 Megapixel)
Pixel Area	3.76 µm x 3.76 µm (14.1 µm²)
Sensor Area	11.3 mm x 11.3 mm, 16 mm diagonal
Peak QE%	> 90% at 550 nm
Readout Mode	Rolling shutter
Binning	2x2 through 16x16
Linearity	> 99%
Cooling Options	Air cooled to -25 °C

Camera Modes

Specifications	16-Bit Standard	16-Bit Extended Dynamic Range (EDR)
Maximum Frame Rate	25 FPS	12 FPS*
Line Time	12.2 µSec	12.2 µSec
Exposure Time	0 to 60 minutes	0 to 120 minutes
Dark Current	<0.001 e⁻/p/sec	<0.001 e⁻/p/sec
Full Well Capacity		
Full Well (gain 1)	50 Ke⁻	—
Sensitivity (gain 2)	17 Ke⁻	—
Read Noise		1.3 e⁻
Full Well (gain 1)	3.3 e⁻	—
Sensitivity (gain 2)	1.3 e⁻	—
Gain		
Full Well (gain 1)	0.75 e-/gray	—
Sensitivity (gain 2)	0.26 e-/gray	—
EDR	—	0.75 e⁻/gray

* Tentative

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

Specifications

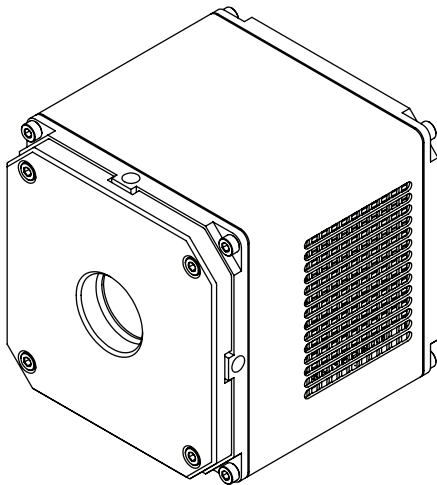|	
Digital Interface	USB 3.2gen 2 (10 Gbps)
Lens Interface	C-Mount
Mounting Points	¼"-20 TPI mounting points on each side
Camera Weight	0.8 Kg, 1.76 lbs
Camera I/O	Read Out Trigger Ready Exposure Out Trigger In

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www.photometrics.com
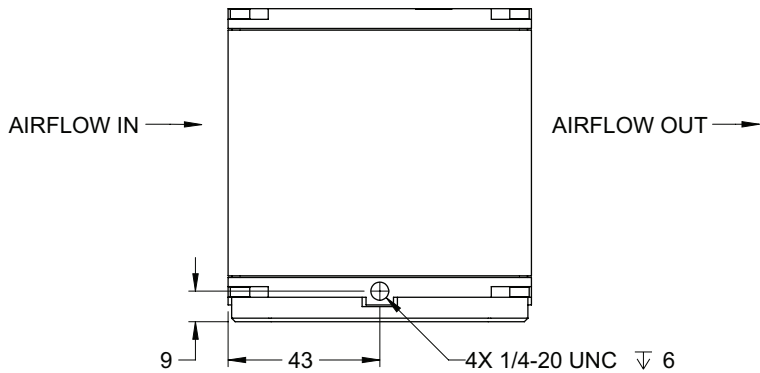photometrics.info@teledyne.com
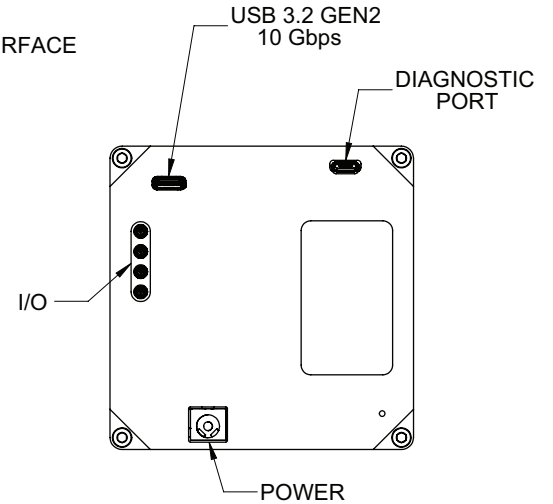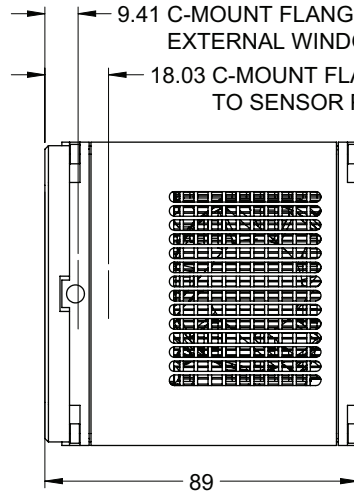Phone **+1 520-889-9933**   2
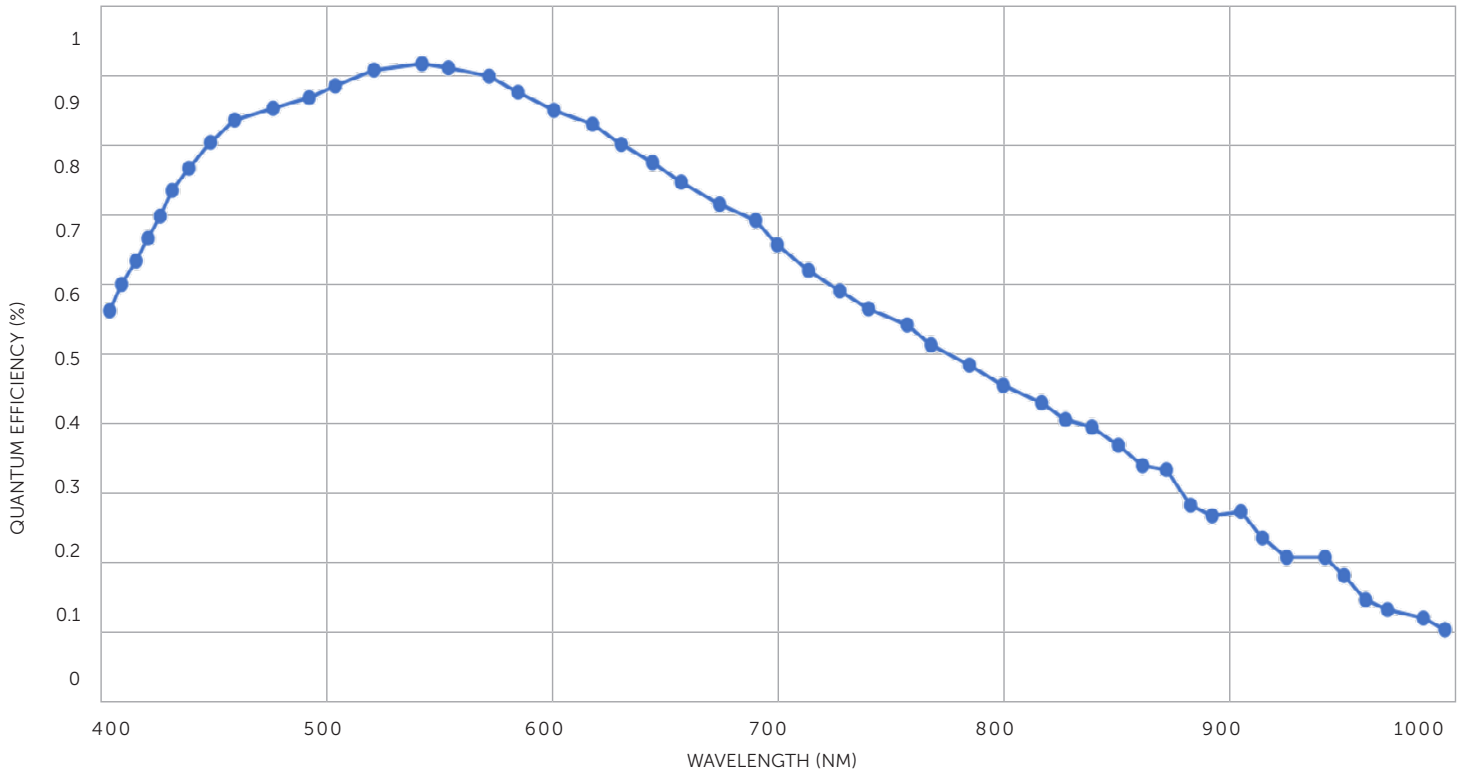
KEY FEATURES

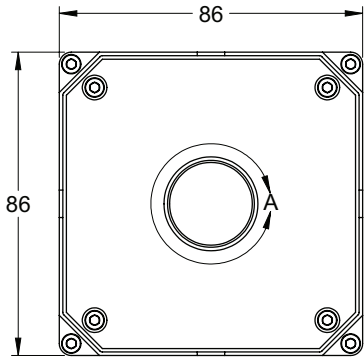**Easiest System Integration**
» True plug-n-play convenience
» Teledyne's ultimate software development kit, (SDK), provides complete control of camera operations
» Easy, seamless integration to your system
» Python, C++, LabVIEW, MATLAB compatibility
» Full optical, mechanical, and software support
» PVCam™ API drivers automate descriptions of functions, parameters, and values used to create a user-designed interface for Retiga E9 cameras and accessories

Accessories Included

USB 3.2 Cable and Card

Trigger Cables

Power Supply

Quickstart Guide

www.photometrics.com
photometrics.info@teledyne.com
Phone **+1 520-889-9933**   3

Technical Drawings

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9.41 C-MOUNT FLANGE TO EXTERNAL WINDOW SURFACE

18.03 C-MOUNT FLANGE TO SENSOR PLANE

89

USB 3.2 GEN2 10 Gbps

DIAGNOSTIC PORT

I/O

POWER

AIRFLOW IN →

AIRFLOW OUT →

9

43

4X 1/4-20 UNC ⊽ 6

SOFTWARE & ENGINEERING SUPPORT

Data Exchange

Full integration into your system design platform and development environment:

» True plug-n-play convenience

» Teledyne's ultimate software development kit, (SDK), provides complete control of camera operations

» Easy, seamless integration to your system

» Python, C++, LabVIEW, MATLAB compatibility

» Full optical, mechanical, and software support

» PVCam™ API drivers automate descriptions of functions, parameters, and values used to create a user-designed interface for Retiga E9 cameras and accessories

Engineering

All support documents are available:

» 3D STEP files

» Software SDK

» Operating Manual

» Software Manual

Request documents and software/drivers:
photometrics.info@teledyne.com

FOR MORE INFORMATION:

Contact your local Teledyne Photometrics representative for additional information.

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ISO 9001:2015

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