TELEDYNE

Teledyne Photometrics
Scientific Imaging

IRIS 9 CMOS CAMERA

KEY FEATURES

- Small 4.25 µm pixels
- Pair with low magnification objectives
- High resolution sensor (9 MP)
- 30 fps imaging
- Simple integration
- Compact form factor
- Programmable scan mode to control camera readout, ideal for light-sheet microscopy

TYPICAL APPLICATIONS

- Light sheet microscopy
- Live cell imaging
- Spatial biology
- Micro-plate readers
- Fluorescence microscopy

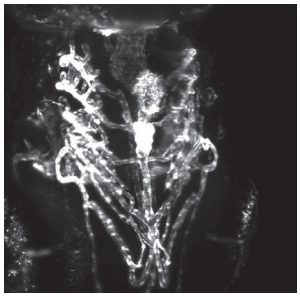
RELIABILITY

- Three-year warranty
- Extended warranty available

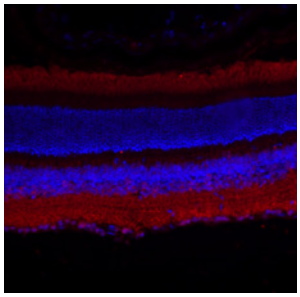
High-Resolution Imaging CMOS Camera

The Iris family of CMOS cameras are designed to provide high-resolution imaging even at low magnifications, covering fields of view of up to 25 mm. Small pixels across a large array allow for the capture of highly detailed images across a wide area, resulting in a high-throughput solution without sacrificing image quality.

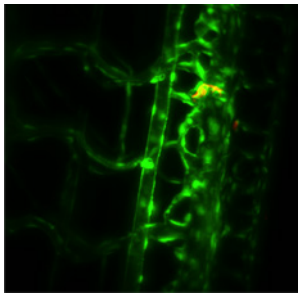
The Iris 9 camera is ideal for light-sheet microscopy, or when needing to image large samples at high resolutions. The Iris 9 offers a 9-megapixel array of small 4.25 µm pixels, ideal for low-magnification scans of large samples.



Light Sheet openSPIM
Dr. Dan Osborn



Whole Tissue Imaging
Dr. Steven Pittler



Light Sheet Microscopy
Prof. John Girkin

IRIS 9 SPECIFICATIONS

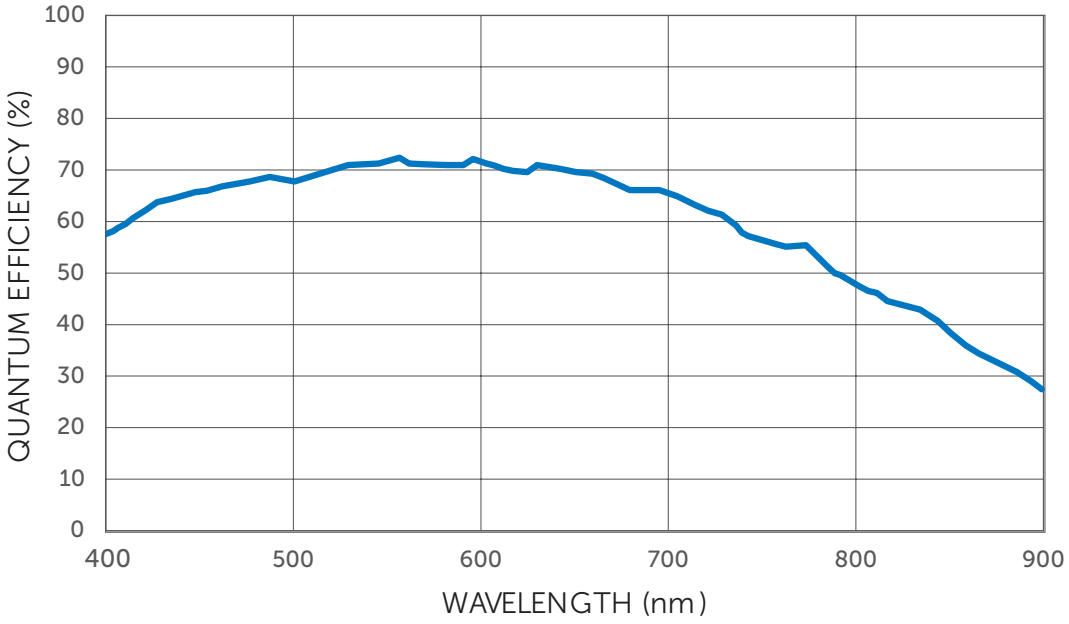
SPECIFICATIONS	Camera Performance
Sensor	GPixel GSense 5130 scientific CMOS sensor
Active Array Size	2960 x 2960 (9 megapixel)
Pixel Area	4.25 µm x 4.25 µm (18.06 μm^2)
Sensor Area	12.61 mm x 12.61 mm (18.06 mm diagonal)
Peak QE%	> 73%
Spectral Response	200 – 1100 nm
Readout Modes	Rolling shutter
	Effective global shutter
	Programmable scan mode (PCIe only)
Digital Binning	2 x 2
Linearity	> 99%
Cooling Options	Air cooled (0 °C @ 30 °C ambient, 0.5 e^-/pixel/second dark current)
Digital Interfaces	USB 3.0
	PCIe
Lens Interfaces	C-mount
Mounting Points	4 x 1/4"-20 UNC mounting points
Camera Weight	0.68 kg, 1.5 lbs

CAMERA MODES

SPECIFICATIONS	Main Imaging Mode
Bit Depth	16-bit
Frame Rate (Full Frame)	30 fps (with PCIe)
Read Noise	1.5 e^-
Cooling (Air)	0 °C
Line Time	11.26 µsec/line
Full Well Capacity	10,000 e^-

TRIGGERING MODE	Function
INPUT TRIGGER MODES	
Trigger First	Sequence triggered on first rising edge
Edge Trigger	Each frame in sequence triggered by rising edge
OUTPUT TRIGGER MODES	
Any Row	Expose signal is high while any row is acquiring data
First Row	Expose signal is high while first row is acquiring data
EFFECTIVE GLOBAL SHUTTER TRIGGER MODES	
All Row	Expose out signal high for exposure time, maintains exposure time but drops frame rate
All Row	Expose out signal high for exposure time - readout time. Keeps frame rate but drops exposure time.
OUTPUT TRIGGER SIGNALS	
Expose Out (up to four signals), Read Out, Trigger Ready	

IRIS 9 QE CURVE



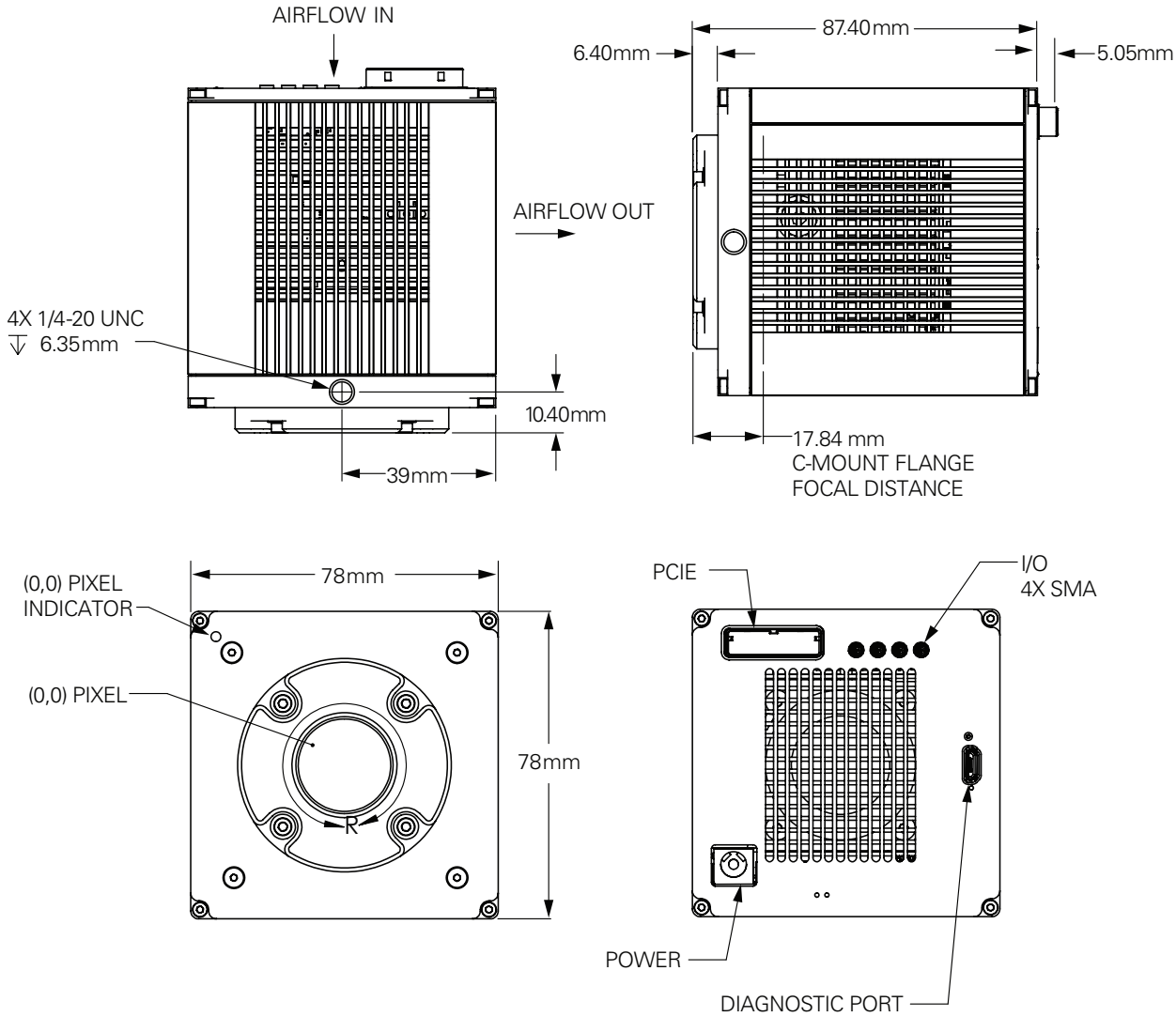
IRIS 9 SPEED TABLE

FRAME RATES (HZ)		
ARRAY SIZE	PCIe INTERFACE	USB 3.0 INTERFACE
2960 x 2960	30	16
2960 x 1500	59	32
2960 x 512	174	94
2960 x 128	695	331

IRIS 9 PROGRAMMABLE SCAN MODE

PROGRAMMABLE SCAN MODE	Function
SCAN MODES	
Auto	Sequence triggered on first rising edge
Line Delay	Each frame in sequence triggered by rising edge
Scan Width	Expose signal is high while any row is acquiring data
SCAN DIRECTION	
Down	Rolling shutter readout begins at the top of the sensor
Up	Rolling shutter readout begins at the bottom of the sensor
Down/Up Alternate	Rolling shutter readout alternates direction after starting at the top of the sensor

IRIS 9 DIMENSIONAL OUTLINES (UNIT: MM)



IRIS 9 ACCESSORIES

ACCESSORIES (INCLUDED)	
PCIe Interface Card	Power supply (12V/10A DC)
PCIe Cable	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

Revision Date: 2024 08 20