

IRIS 15 CMOS CAMERA

KEY FEATURES

- Large 25 mm field of view
- Small 4.25 μm pixels
- High resolution sensor (15 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

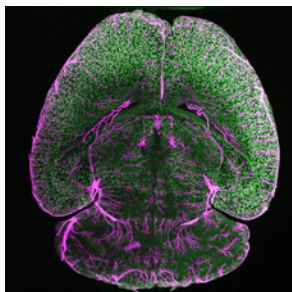
RELIABILITY

- Three-year warranty
- Extended warranty available

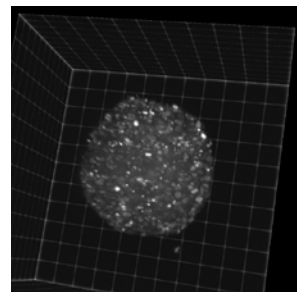
High-Resolution Imaging CMOS Camera

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.

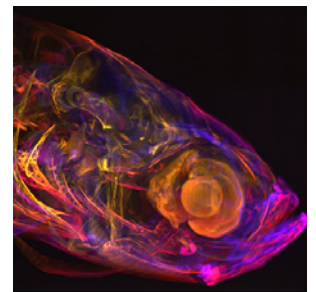
The Iris 15 offers a large 25 mm field of view using a F-mount connector, featuring a 15 megapixel array of small 4.25 μm pixels. This is the ultimate solution for high-resolution imaging at lower magnifications, optimized for light-sheet microscopy.



mesoSPIM Light Sheet
Dr. Fabian Voigt



Organoid Light Sheet
Dr. Franziska Decker



Light Sheet Microscopy
Dr. Jan Huisken

IRIS 15 SPECIFICATIONS

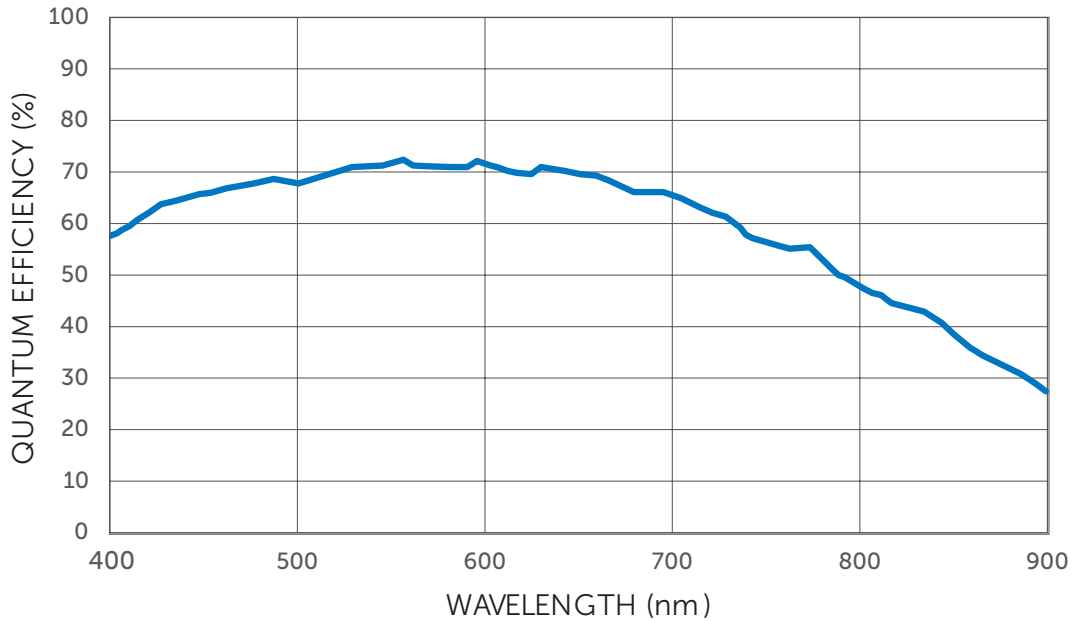
SPECIFICATIONS	Camera Performance
Sensor	GPixel GSense 5130 scientific CMOS sensor
Active Array Size	5056 x 2960 (15 megapixel)
Pixel Area	4.25 μm x 4.25 μm (18.06 μm^2)
Sensor Area	21.49 mm x 12.61 mm (24.9 mm diagonal)
Peak QE%	> 73%
Readout Modes	Rolling shutter
	Effective global shutter
	Programmable 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	F-mount
Mounting Points	4 x 1/4" -20 UNC mounting points
Camera Weight	0.68 kg, 1.5 lbs

CAMERA MODES

SPECIFICATIONS	Camera Performance
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 $\mu\text{sec}/\text{line}$
Full Well Capacity	13,000 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 15 QE CURVE



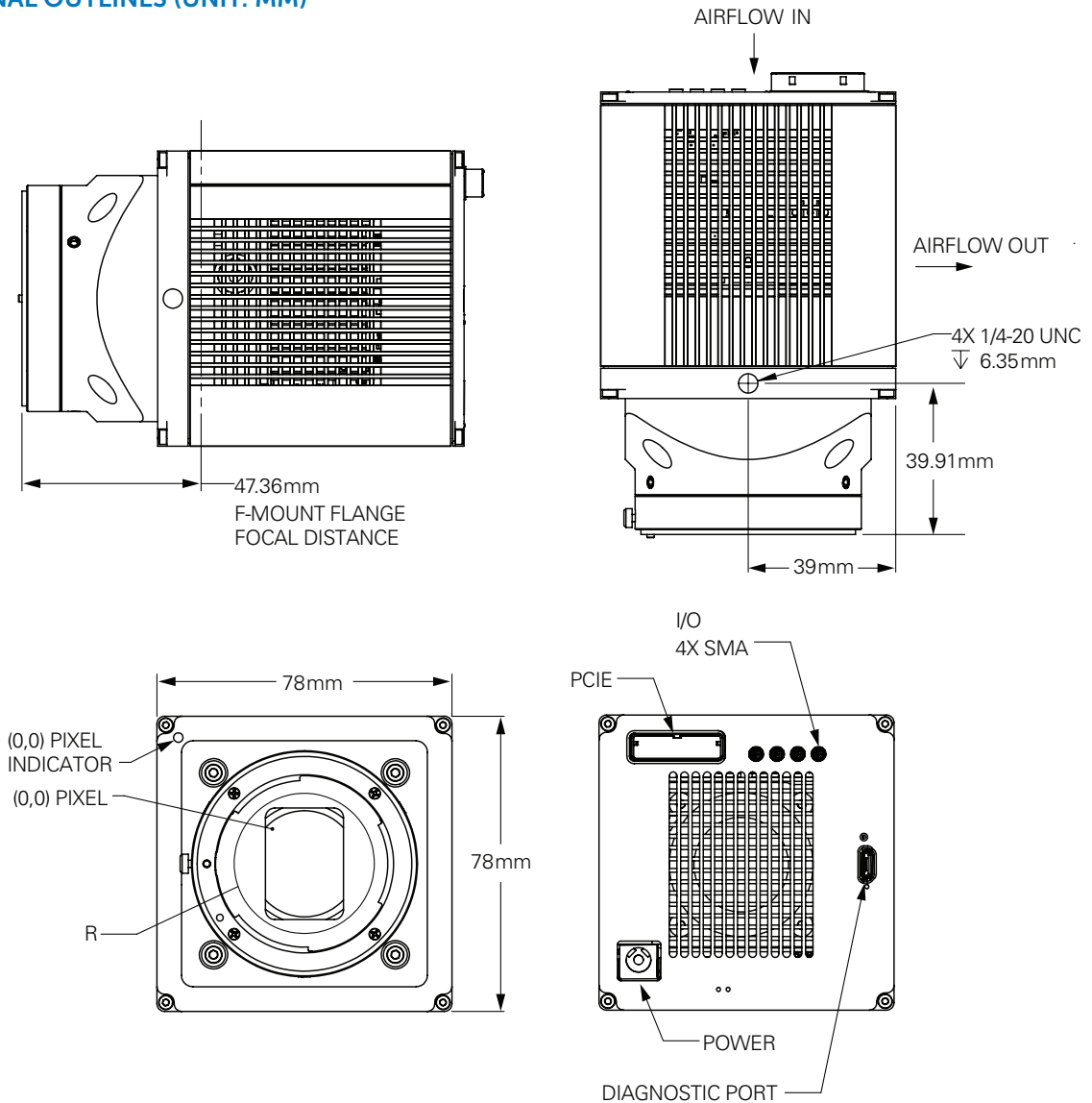
IRIS 15 SPEED TABLE

FRAME RATES (HZ)		
ARRAY SIZE	PCIe INTERFACE	USB 3.0 INTERFACE
2960 x 2960	30	10
2960 x 1500	59	31
2960 x 512	174	94
2960 x 128	695	321

IRIS 15 PROGRAMMABLE SCAN MODE

PROGRAMMABLE SCAN MODE	Function
SCAN MODES	
Auto	Normal camera operation
Line Delay	Control rolling shutter propagation rate by adding delays to the line time
Scan Width	Control number of rows between reset and readout signal in the rolling shutter
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 15 DIMENSIONAL OUTLINES (UNIT: MM)



IRIS 15 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

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Specifications in this datasheet are subject to change. Refer to the Teledyne Photometrics website for most current specifications.
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