

4.2MP Scientific CMOS

Key Features and Benefits

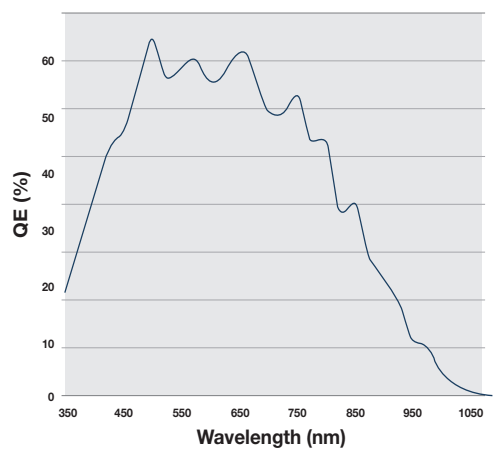
High Frame Rate for shorter exposures!

- **4.2MP Scientific CMOS sensor**
Enables large field of view imaging
- **5.5µm x 5.5µm**
Enables ultra sharp image resolution
- **On-board Non Uniformity Correction (NUC)**
Enables highest quality images
- **TE cooling**
Optimizes dark current
- **Quantum Efficiency: >63% @ 500nm and >34% @ 850nm**
Optimum Photon collection
- **Ultra compact and rugged**
Ideal for OEM integration into Life Science instruments

Resolution	2048 x 2048
Readout Noise	7e Noise
Frame Rate	37.5Hz
CameraLink	12 bit



Quantum Efficiency



Sample Applications

- Adaptive Optics and Astronomy
- Bio & Chemi-luminescence
- Calcium signaling
- Fluorescence imaging / spectroscopy
- Flow cytometry
- FRET / FRAP / TIRF
- Genome sequencing
- High content screening
- High resolution fluorescence imaging
- Hyperspectral imaging
- Live cell imaging
- Single molecule detection
- Solar cell inspection
- X-ray tomography



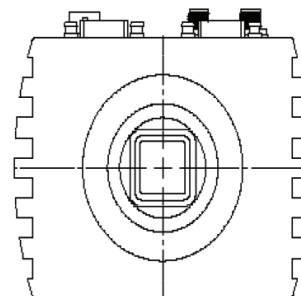
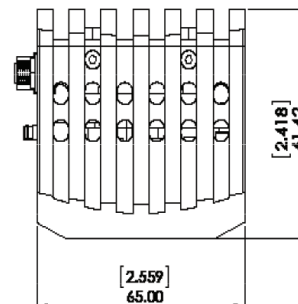
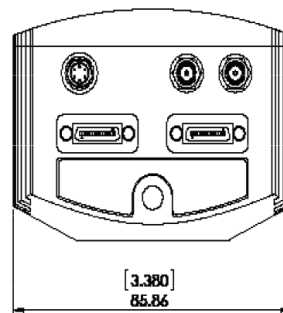
Specifications for iRiS

Sensor	Scientific CMOS
Sensor Type	1" Scientific CMOS
Active Pixel	2048 x 2048
Pixel Size	5.5µm x 5.5µm
Active Area	11.26mm (H) x 11.26mm (V)
Full Well Capacity	12,000 electrons
Non Linearity	<1%
Readout Noise	<7 electrons (Global Shutter)
Dynamic Range	66dB (Single shot)
Exposure Time	27.7µs to 30 min
Frame Rate	37.5Hz, higher through Binning & ROI
Dark Current	<9 eles/pix/sec @ +5°C
Digital Output Format	12 bit CameraLink, Base Configuration 2-tap
Peak Quantum Efficiency	>63% @ 500nm >34% @ 850nm
Spectral Response	350 - 1100nm
Shutter Mode	Global Shutter (Snapshot)
Cooling	+5°C with ambient air @ +20°C
Cooling Method	TEC with forced air (fan)
Lens Mount	C mount
Synchronization	Trigger IN and OUT - TTL compatible
Power Supply	12V DC ± 10%
Total Power Consumption	<2.5W without TEC <7.5W with TEC ON
Operation Case Temperature	-20°C to +55°C
Storage Temperature	-40°C to +85°C
Dimensions	85.9mm x 65mm x 61.5mm
Weight (no lens)	<432g

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Dimensions

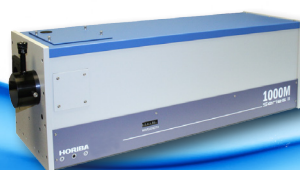
Unit: [inch]mm



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Long Focal Length Spectrometers



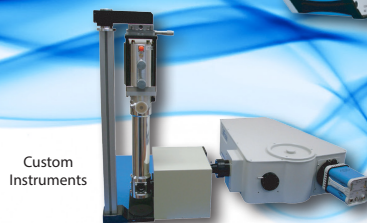
Scientific Cameras



Software



Micro-Spectrometers



Custom Instruments



Lifetime Components



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