Kepler Cooled Scientific CMOS Cameras

The Ultimate in Sensitivity

Preliminary Data Sheet

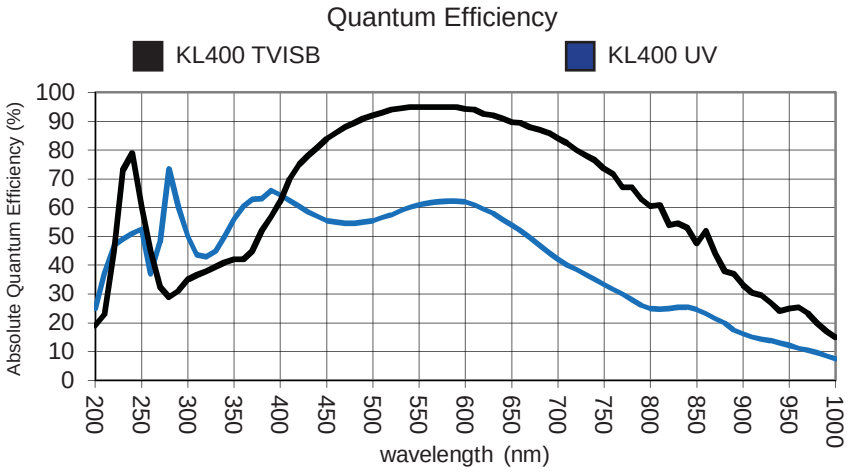
KL400: 95% Peak QE, 1.3 e- Noise RMS

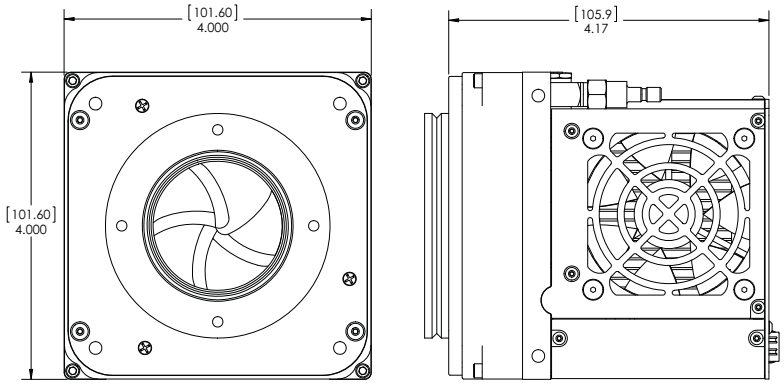
The Kepler KL400 sCMOS camera represents the first release in a new family of Scientific CMOS cameras from Finger Lakes Instrumentation. The KL400 provides ultra-high sensitivity, ultra-low noise with high frame rates; all at game-changing price to performance ratio.

KL400 with Optional 43mm Shutter
Air & liquid cooling (standard)

Sensor Type	Back illuminated
Active Pixels	2048 x 2048
Pixel Size (microns)	11 x 11
Effective Area	22.5 x 22.5 mm
Sensor Diagonal	31.9 mm
Full Well Capacity	89000 electrons
Frame rate (rolling)	48 fps
	24 fps HDR
Read Noise (rolling)	1.5 e- HDR
Dynamic Range	96 dB HDR
Peak QE	94%
Cooling	Air and Liquid
Maximum Cooling (Air)	60ºC Below Ambient
Dark Current	0.4 eps at -20C
Interface	USB 3.0
Interface (Optional)	SFP[1]
Data Bit Depth[2]	16 bit
Mount	F-mount
Video size	2.0”
Subarray Readout	Yes
Electromechanical Shutter	Optional
Ex Trigger In	Yes
Ex Trigger Out	Yes
Software	FLI

Applications:
Orbital Debris Detection
Photocell Inspection
Forensic Sciences
Super-Resolution Microscopy
Confocal Microscopy
Light Sheet Microscopy
TIRF and GFP





[1] SFP = Small Form factor Pluggable: high speed fiber optic interface
[2] 16-bit data merged from two 12 bit converters

Quality. Cooled. Cameras.

Finger Lakes Instrumentation LLC
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Kepler Cooled Scientific CMOS Cameras

The Ultimate in Speed

Preliminary Data Sheet

KL2020: 375 fps, 2.0 e- Noise RMS

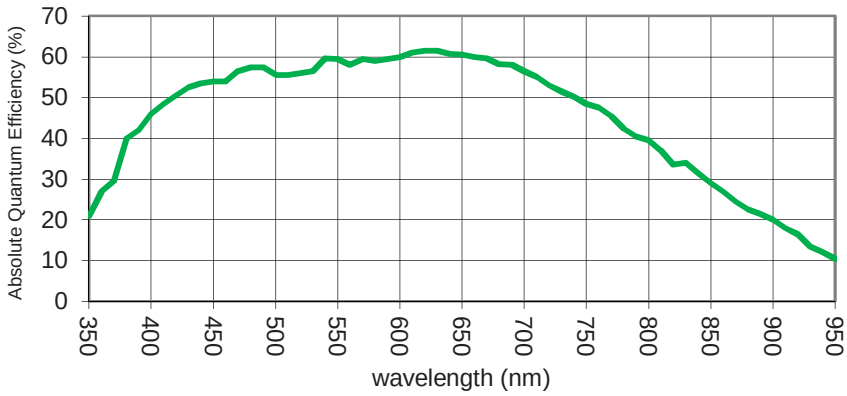
The Kepler KL2020 cooled Scientific CMOS camera provides high sensitivity, low noise, and ultra high frame rates; all at game-changing price to performance ratio.

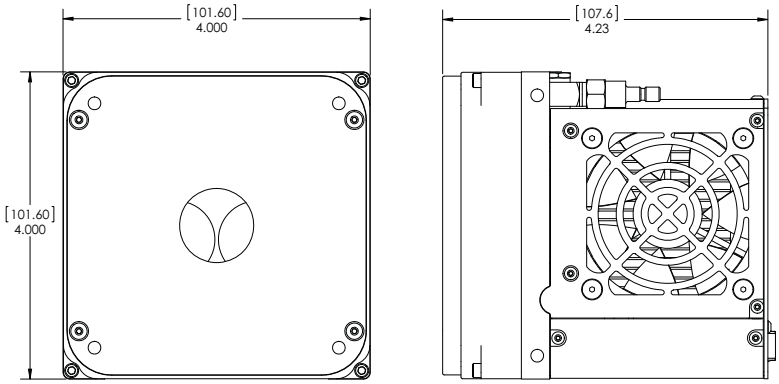
KL2020 with air & liquid cooling

Sensor Type	Front illuminated
Active Pixels	2048 x 2048
Pixel Size (microns)	6.5 x 6.5
Effective Area	13.3 x 13.3 mm
Sensor Diagonal	18.8 mm
Full Well Capacity	48000 electrons
Frame rate (global)	376 fps (10 bit)
	94 fps HDR
Frame rate (rolling)	94 fps
	47 fps HDR
Read Noise (global)	6 e- RMS
Read Noise (rolling)	2 e- RMS
Dynamic Range	88 dB HDR
Peak QE	62%
Cooling	Air and Liquid
Maximum Cooling (Air)	60ºC Below Ambient
Dark Current	<1 eps at 0°C
Interface	USB 3.0
Interface (Optional)	QSFP[1]
Data Bit Depth[2]	16 bit
Mount	C-mount
Video size	1.2”
Subarray Readout	Yes
Electromechanical Shutter	Optional
Ex Trigger In	Yes
Ex Trigger Out	Yes
Software	FLI

Applications:
Super-Resolution Microscopy
Confocal Microscopy
Light Sheet Microscopy
TIRF and GFP

Quantum Efficiency





[1] QSFP = Quad Small Form factor Pluggable high speed fiber optic interface
[2] 16-bit data merged from two 12 bit converters

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