FINGER LAKES INSTRUMENTATION

KEPLER CMOS CAMERA

KL4040 FI.

MADE IN USA

DATASHEET flicamera.com/models/kl4040-fi

PRODUCT PAGE

4K x 4K at 23 fps

The KL4040 scientific CMOS camera has the same pixel size and imaging area as the popular KAF-16803 CCD, but with 1/3 the noise and 40% higher quantum efficiency. Kepler cooled sCMOS cameras provide ultra-high sensitivity, ultra-low noise, and high frame rates, all at game-changing price to performance ratio.



KL4040 without shutter

KEY SPECIFICATIONS

SENSOR	SIZE (MM)	RESOLUTION	PIXEL SIZE
GPixel GSense4040	36.9 X 36.9 mm (52.1 mm)	4096 x 4096	9 x 9 µm

FULL WELL	READ NOISE	DARK CURRENT	BIT DEPTH
70000 electrons	3.7 e-	0.08 eps at -10C	16 bit

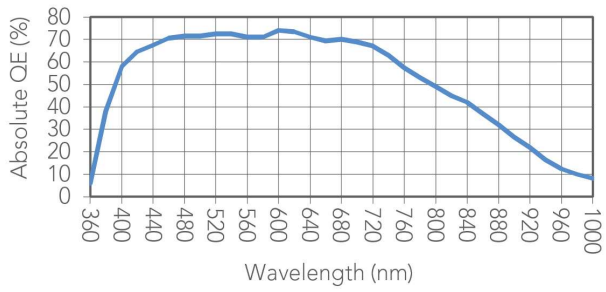
TECHNICAL DATA

Sensor Type	Front Illuminated CMOS	**Sensor**	GPixel GSense4040
Shutter Type	Rolling; Rolling with Global Reset	**Active Pixels**	4096 x 4096
Pixel Size (microns)	9 x 9 µm	**Imaging Area (Diagonal)**	36.9 X 36.9 mm (52.1 mm)
Full Well Capacity (e-)	70000 electrons	**Typical Readout Noise**	3.7 e-
Dynamic Range	85.2 dB	**Frame Rate (fps)**	23 fps (QSFP V2)
Cooling Method	Air and Liquid [1]	**Max. Cooling (Air)**	35°C below ambient
Temperature Stability	0.1°C	**Dark Current (typical)**	0.08 eps at -10C
Interface	USB 3.0 (Optional QSFP [2])	**Data Bit Depth**	16 bit
Optional Shutter	65mm	**Optional Mounts**	Medium Format Recommended (6x7)
Subarray Readout	Standard	**External Trigger In/Out**	Standard

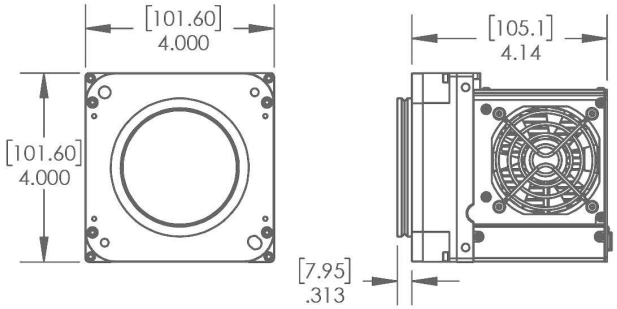
SDK / Software	Kepler SDK / FLI Pilot	**Weight**	4 lbs (1.8 kg)

TECHNICAL FIGURES

Absolute quantum efficiency



Mechanical outline



NOTES AND OPERATING CONDITIONS

1 Liquid circulation connectors sold separately.

2 QSFP = Quad Small Form factor Pluggable: high speed fiber optic interface.

3 16-bit data merged from two 12 bit converters.

See FLIcamera.com for alternate configurations

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