

## HIGH SPEED LOW LIGHT LOW NOISE SCIENTIFIC CAMERA



VISIBLE  
400 - 900 nm



2067 FPS






Subelectron RON



240 x 240 EMCCD  
24  $\mu$ m pixel pitch



SDK compatible with  $\mu$ Manager,  
LabVIEW, MatLab, , , 

**ULTRA LOW LATENCY  
PHOTON COUNTING CAMERA**



### APPLICATIONS

#### **ASTRONOMY:**

Adaptive Optics for Astronomy  
Space Debris Tracking  
Speckle Interferometry  
Secure laser communications  
(long distance, space to ground)  
Long range surveillance and Tracking

#### **LIFE SCIENCES:**

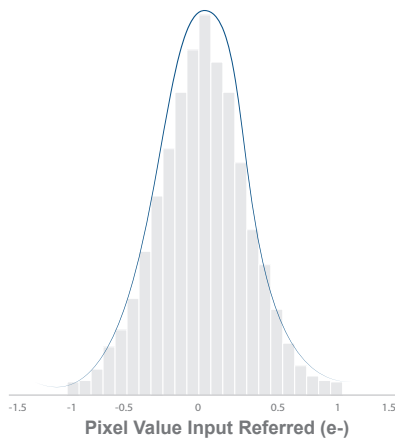
Cellular Microscopy  
Fluorescence Microscopy

# OCAM<sup>2</sup>K PERFORMANCES

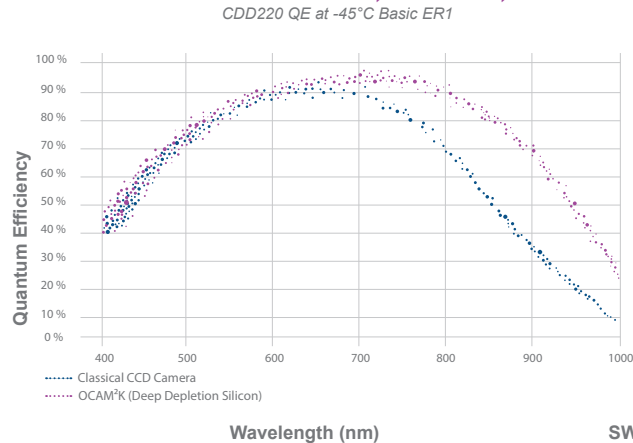
TEST MEASUREMENT	Result	Unit
Maximum speed Full Frame	2 067	FPS
Mean readout noise at 2000 FPS and multiplication gain ~600	0.4	e-
Dark signal at 2000 FPS at -45°C	<0.01	e- pixel <sup>-1</sup> frame <sup>-1</sup>
Quantization	14	bit
Detector Operating Temperature	-45	°C
Peak Quantum Efficiency at 650nm	>90	%
Linearity at gain x1000 from 10 e- to 150 e-	<3.5	%
Linearity at gain x1 from 15,000 e- to 150,000 e-	<3.5	%
Image Full Well capacity at gain x1	270 000	e-
Parallel CTE at gain x1, 750 FPS	99.99 min	%
Serial CTE at gain x1, 750 FPS	99.95 min	%
Ultra low latency Camera Link® Full interface	43	µs
Maximum speed in 2 x 2 binning mode	3 700	FPS

ADDITIONAL FEATURES
Output : Camera Link® Full
Optical Interface : C-Mount
14 bits precision A/D converter
Integrated cooling temperature controller
Fully sealed resistant aluminum body with low thermal gradient
Clock & Trigger input/output for synchronous operation
Custom design and Read Out modes available upon request

NOISE HISTOGRAM FOR GAIN X 1000



TYPICAL QUANTUM EFFICIENCY, NO WINDOW, AT 228°K



SWaP : H175 x W76 x L242.4 mm, 4.2 kg, up to 90 W typical with cooling

## WAVEFRONT SENSOR OPTION

MICROLENS ARRAY SPECIFICATIONS ( standard proposal, customizable on request)	Result	Unit
Focal length (distance to maximum intensity) @ 633nm	22	mm
Number of sub-apertures	20 x 20	N/A
Lens shape	Square	N/A
Lens pitch	288	µm
Lens clear aperture	>286	µm
Lens array position on substrate	Centered	N/A
Fill factor	>98	%

### First Light Imaging SAS

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