

ULTRA LOW NOISE ULTRA HIGH SPEED SWIR CAMERA



SWIR
0.8 - 2.5 μm



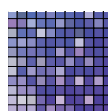
3500 FPS



Subelectron RON + Dark

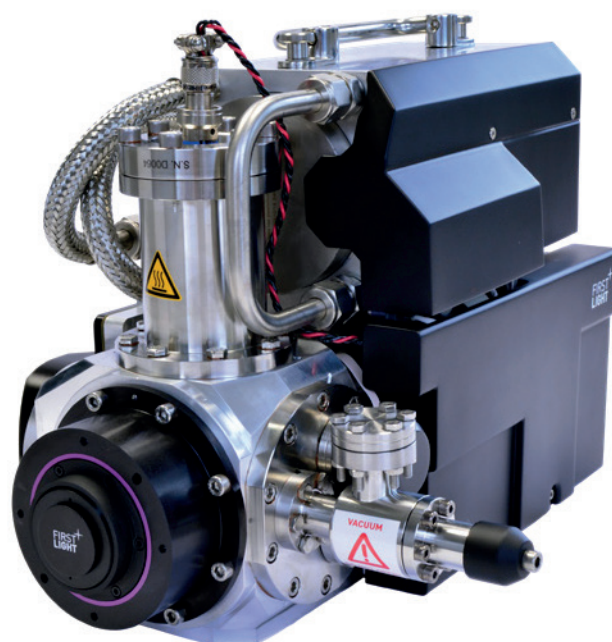


320 x 256 e-APD MCT,
24 μm pixel pitch



Multiple Readout Modes

FASTEST AND LOWEST NOISE MCT
FOR HIGH DEMANDING SCIENTIFIC APPLICATION



APPLICATIONS

ASTRONOMY:

Adaptive Optics for Astronomy
Astronomical Observations
with Interferometers
Speckle Interferometry
Space Debris Tracking
Fringe Tracking

LIFE SCIENCES:

Cellular Microscopy
Fluorescence Microscopy
Raman Spectroscopy
Hyperspectral Imaging
OCT imaging

INDUSTRY:

Semiconductor inspection

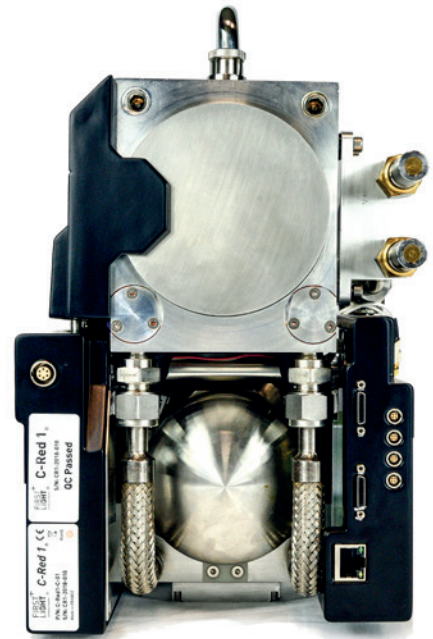
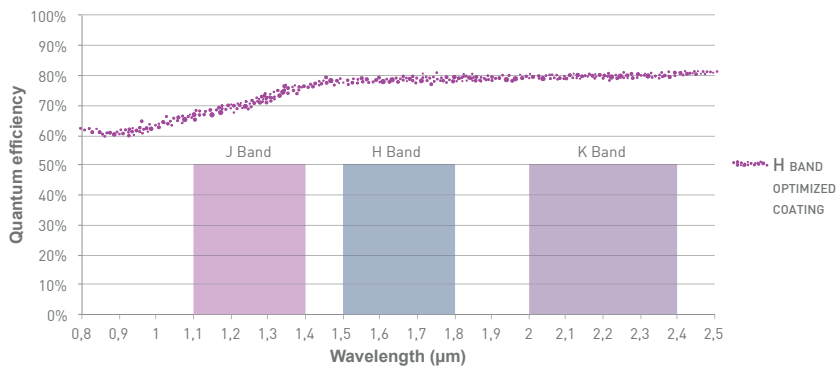
C- RED One PERFORMANCES

TEST MEASUREMENT*	Result	Unit
Maximum speed Full Frame	3500	FPS
Readout Noise at 3500 FPS and gain ~ 30	<1	e-
Dark current looking at black body at a temperature of 80K and e-APD gain x10	<80	e-/p/s
Quantization	16	bit
Detector Operating Temperature (No LN)	80	K
Flat Quantum Efficiency from 1.1 μm to 2.4 μm (J, H, K)	>60	%
Operability ± 30%	99.3	%
Excess noise Factor F	<1.25	n/a

*Average values observed

ADDITIONAL FEATURES
Output : Camera Link® Full
Optical Interface : T-Mount
Multiple Readout Modes <ul style="list-style-type: none"> •Global reset •Rolling reset •Single, CDS or multiple non destructive reads
ROI
Ultra low latency Camera Link® full interface
Clock & Trigger input/output for synchronous operation
Custom design available upon request
Embedded cold blocking filters

TYPICAL QE OF SAPHIRA E-APD



SWaP : H 238 x W 180 x L 365 mm, 19.4 kg, up to 300 W

First Light Imaging SAS
 Europarc Sainte Victoire Bât 6, Route de Valbrillant, Le Canet 13590
 Meyreuil FRANCE
 Tel.: + 33 4 42 61 29 20
www.first-light-imaging.com
contact@first-light.fr

First Light Imaging Corp.
 185 Alewife Brook Parkway, Suite 210, Cambridge, MA 02138 USA
www.first-light.us



This project leading to this application has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement N°673944

