

## VERY HIGH SPEED COMPACT STABILIZED SWIR CAMERA



SWIR  
0.9 - 1.7  $\mu\text{m}$



600 FPS



<30 e- RON



640 x 512 InGaAs,  
15  $\mu\text{m}$  pixel pitch



93 dB and true 16 bits  
High Dynamic Range



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

**STABILIZED InGaAs CAMERA**  
WITH INDUSTRIAL DESIGN



Smart algorithm for temperature stabilization

### APPLICATIONS

#### INDUSTRY:

- Non-destructive inspection
- Quality and production control
- Waste sorting
- Welding control
- Additive manufacturing
- Laser beam profiling

#### SCIENCE & ASTRONOMY:

- Hyperspectral and multispectral imaging
- Microscopy
- Free Space Optics

#### SURVEILLANCE:

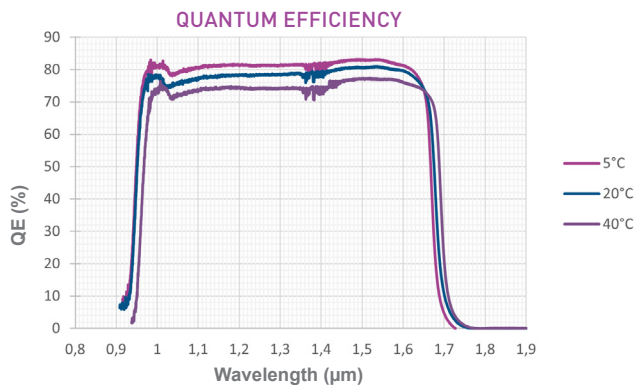
- Thermography
- Unmanned aerial vehicle
- Maritime surveillance
- Security / night vision

# C-RED 2 LITE PERFORMANCES

FEATURES*		Result	Unit
Sensor size		640 x 512	pixels
		0.3	Mp
Pixel pitch		15	µm
Maximum speed Full Frame		600	FPS
Readout Noise at high gain, Tint at 50 µs, 600 FPS Full Frame at 5°C		<30	e-
Quantization		14	bit
Flat Quantum Efficiency 1.0 to 1.65 µm		> 70	%
Operability due to signal response / pixels with signal ± 0.3*median at 35°C		> 99.8	%
Operating Temperature (case)		-40 to +70	°C
Detector Operating Temperature (depending on setup and environment)		-40 to +60	°C
Max ΔT° between case and sensor		25	°C
Image Full well capacity	low gain	1.4	Me-
	med gain	115	ke-
	high gain	34	ke-
<b>Maximum speed in 32 x 4 (min) pixels</b>		<b>32066</b>	<b>FPS</b>
Maximum speed in 320 x 256 pixels		1779	FPS

\* Typical values

ADDITIONAL FEATURES	
Data interface: USB 3.1 Gen 1 or CameraLink®	
Possible optical interface: C-Mount, CS-Mount	
LVTTTL synchronization (5 V tolerant)	
High Dynamic Range mode: 93 dB and true 16 bits	
<b>Industrial design: TEC stabilized camera, no fan</b>	
<b>Software: Graphical User Interface: First Light Vision - Software Development Kit: (C, C++, C#, Python, MatLab) / LabVIEW / µManager / Halcon</b>	



## OPTIMIZED THERMAL DISSIPATION OPTIONS



Passive heat sinks (left) and hydraulic cooling plate (right)

## FRAME RATE TABLE CROPPING MODE CAMERA LINK® OUTPUT

		Columns					
		32	64	128	256	512	640
Lines	4	32 066	31 512	30 458	28 548	25 367	24 029
	8	28 108	27 348	25 945	23 532	19 840	18 397
	16	22 542	21 631	20 015	17 413	13 819	12 526
	32	16 147	15 254	13 736	11 455	8 599	7 646
	64	10 302	9 596	8 440	6 801	4 898	4 297
	128	5 975	5 509	4 765	3 752	2 632	2 291
	256	3 247	2 975	2 547	1 978	1 367	1 184
512	1 697	1 549	1 319	1 016	697	602	

For USB 3 output: max 9999 FPS

## BACK VIEW WITH CAMERA LINK® OUTPUT



(Also available in USB 3 Output)

SWaP : H65 x W65 x L78.1 mm, 460 g, 20W Max

## First Light Imaging SAS

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**FIRST LIGHT**  
ADVANCED IMAGERY