

VERY HIGH SPEED COMPACT STABILIZED SWIR CAMERA



SWIR
0.9 - 1.7 μm



600 FPS



30 e- RON



640 x 512 InGaAs,
15 μm pixel pitch



93 dB and true 16 bits
High Dynamic Range



SDK compatible with μ Manager,
LabVIEW, MatLab, C, C++, Python

STABILIZED InGaAs CAMERA
WITH INDUSTRIAL DESIGN



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

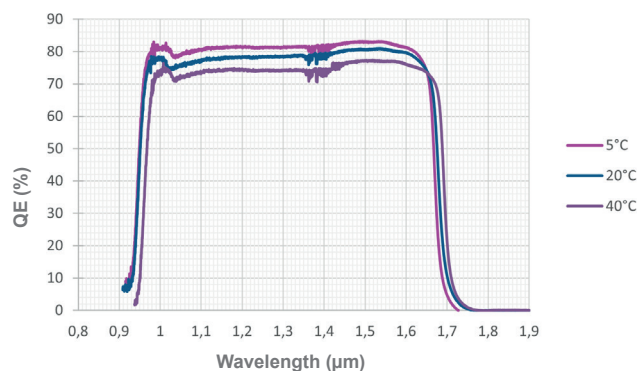
C-RED 2 LITE PERFORMANCES

FEATURES*	Result	Unit
Maximum speed Full Frame	600	FPS
Readout Noise at high gain, Tint @ 50 μ s, 600 FPS Full Frame at 5°C	30	e-
Quantization	14	bit
Flat Quantum Efficiency 1.0 to 1.65 μ m	> 70	%
Operability due to signal response / pixels with signal $\pm$ 0.3*median at 35°C	99.8	%
Operating Temperature (case)	-40 to +60	°C
Detector Operating Temperature (depending on setup and environment)	-40 to +60	°C
Δ T° between case and sensor	25	°C
Image Full well capacity at low gain, 600 fps	1.4	Me-
Image Full well capacity at med gain, 600 fps	115	ke-
Image Full well capacity at high gain, 600 fps	34	ke-
Maximum speed in 32 x 4 (min) pixels	32066	FPS
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
Industrial design: TEC stabilized camera, no fan
Various options for optimized heat dissipation: heat sinks and liquid cooling plate.
Software: Graphical User Interface: First Light Vision - Software Development Kit: (C, C++, C#, Python, MatLab) / LabVIEW / μManager / Halcon

QUANTUM EFFICIENCY



FRAME RATE TABLE CROPPING MODE CAMERA LINK® OUTPUT

		Columns					
Lines		32	64	128	256	512	640
	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 USB3 Output)

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



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