

1.9 μm & 2.2 μm EXTENDED InGaAs SWIR CAMERA



1.1 - 1.9 μm
or
1.3 - 2.2 μm



600 FPS



< 40 e^- RON
or
< 50 e^- RON



InGaAs 640x512
15 μm pixel pitch



SDK compatible with μ Manager,
LabVIEW, MatLab, Python...

HIGH SPEED EXTENDED SWIR



APPLICATIONS

ASTRONOMY:

Adaptive Optics
Laser Communications

SURVEILLANCE:

LiDAR
Long Range Imaging

INDUSTRY:

Multispectral Imaging
Quality/Production Control
Laser beam characterization

RESEARCH:

Spectroscopy
Fluorescence Microscopy
Material Science

C-RED 2 EXTENDED RANGE 1.9µm & 2.2µm PERFORMANCES

TEST MEASUREMENT*	C-RED 2 ER 1.9µm	C-RED 2 ER 2.2µm	Unit
	Result	Result	
Full sensitivity range (QE >10%)	1100 - 1900	1300 - 2150	nm
Quantum Efficiency >70%	1150 - 1800	1380 - 2050	nm
Maximum speed Full Frame	600		FPS
Readout Noise at high gain, Tint @ 50µs, 600 FPS Full Frame	<50 (@ -40°C)	<40 (@ -55°C)	e-
Dark Current (looking at a 20°C target)	20 (@ -40°C)	120 (@ -55°C)	ke/p/s
Quantization	14		bit
Operability	> 95 (@ -40°C)	contact us	%
Image Full well capacity at low gain, 600 fps	1500		ke-
Image Full well capacity at med gain, 600 fps	130		ke-
Image Full well capacity at high gain, 600 fps	34		ke-
Maximum speed in 32 x 4 (min)	32066		FPS
Maximum speed in 320 x 256	1779		FPS

* Average values observed

ADDITIONAL FEATURES

Outputs: USB 3.1 Gen 1 or CameraLink® Full

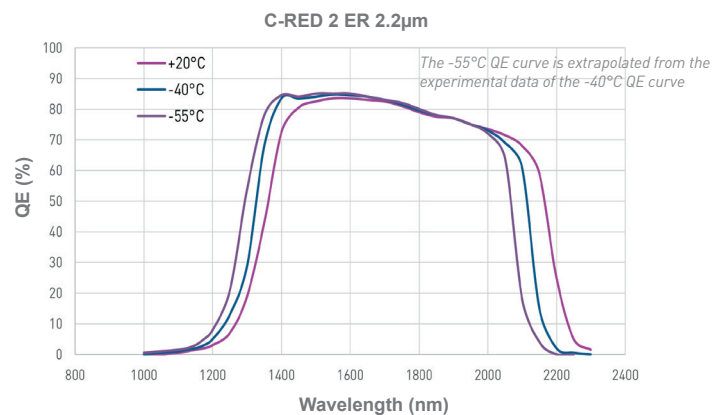
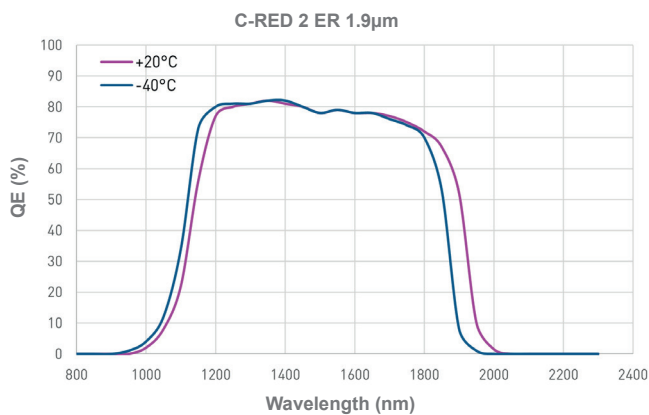
Embedded image corrections

Optical interface: C-Mount

LVTTTL/LVDS synchronization

Software: **Graphical User Interface:** First Light Vision - **Software Development Kit:** [C, C++, C#, Python, MatLab] / LabVIEW / µManager / Halcon

QUANTUM EFFICIENCY



FRAME RATE TABLE AT 600 FPS READOUT SPEED 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



SWaP : H55 x W75 x L140 mm, 0.9 kg

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