



Creative Sensor Inc.

Mars Series

LWIR Camera Module

100% Made in TAIWAN



NDA
Compliant



NDA Compliant

100% made in Taiwan.
Supply Chain NDA compliant.



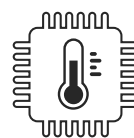
Multiple interface

Dual channel output for image & raw
data through single or dual video outputs
selectively, easy to integrate.



Small & Lightweight

24(H) x 24(W)mm & only 13g weight (w/o lens),
best for drone & handheld imager.



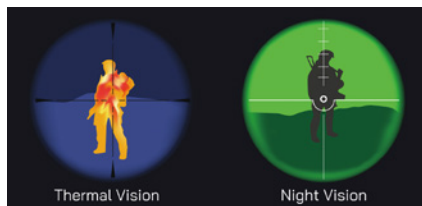
High Accuracy & Speed

Best Radiometric Accuracy with non-linear regression AI.
Algorithm: $\pm 1.5^\circ\text{C}$ @ 10°C ~ 100°C obj. ($\pm 0.5^\circ\text{C}$ for body temp.)
Two temp. modes switchable (High/Low Gain),
observe up to 500°C , cover 95% industrial inspection demand.
30(VGA)/60(QVGA) FPS and excellent AGC/DDE for video surveillance.

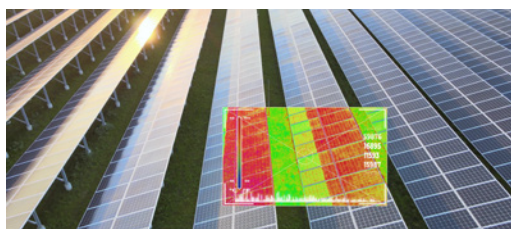
Thermal Image:



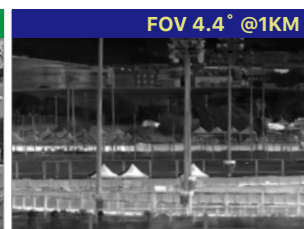
Rescue & Firefighting



Anti-camouflage & Detection



Industrial Inspection w/ UAV



Long Range Surveillance

Specification

Resolution	640x480 (Mars640)	320x240 (Mars320)
Pixel Pitch	12um	
NETD	<40mK	
Frame Rate	30 FPS	60 FPS
Control CH	UART	
Video CH	CMOS (BT.656, RGB), UVC (YUV, RGB, H.264), RTSP (YUV, RGB, H.264), MIPI-CSI (YUV, RGB) (with Accessory), Analog (NTSC, PAL) (with Accessory).	

Field of View	F/# (mm)	FOV (HxV) (DEG)	
	2.73		92.0x66.5
	3.7		60.0x44.7
	4.62	95.0x71.5	47.5x38.0
	6.66	71.8x51.7	36.0x27.8
	9.1	48.6x36.2	24.1x18.0
	13.5	32.0x24.1	16.2x12.2
	19	23.0x17.2	11.6x8.7
	25	17.5x13.1	8.7x6.6
	35	12.5x9.4	6.3x4.7
	50	8.7x7.0	4.7x3.5
	60	7.3x5.5	3.7x2.8
	75	5.9x4.4	2.9x2.2
	100	4.4x3.3	2.2x2.7



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Working Distance of Lens:

Focal Length (mm)	Human			Vehicle			Vessel		
	D	R	I	D	R	I	D	R	I
2.73mm	105	26	13	262	65	33	881	220	110
3.7mm	142	36	18	355	89	44	1194	299	149
4.62mm	177	44	22	443	111	55	1491	373	186
6.66mm	256	64	32	638	160	80	2150	537	269
9.1mm	350	87	44	872	218	109	2937	734	367
13.5mm	519	130	65	1294	323	162	4357	1089	545
19mm	730	182	91	1821	455	228	6132	1533	767
25mm	960	240	120	2396	599	299	8069	2017	1009
35mm	1345	336	168	3354	839	419	11296	2824	1412
50mm	1921	480	240	4792	1198	599	16137	4034	2017
60mm	2305	576	288	5750	1438	719	19365	4841	2421
75mm	2881	720	360	7188	1797	898	24206	6052	3026
100mm	3841	960	480	9583	2396	1198	32275	8069	4034

Unit: Meter

Object Size:

Human	1.7x0.5m
Vehicle	2.3x2.3m
Vessel	15x4m

D = Detection limit: [0.75/1] lp	2 x 2 pixel
R = Recognition limit: [3/4] lp	8 x 8 pixel
I = Identification limit: [6/8] lp	16 x 16 pixel

