

MicroLine ML23042

Quality. Cooled. Cameras.

2048 x 2048 Imaging Array

15 μm Pixel Size

At 3.7 x 3.7 x 4.8 inches the MicroLine is a small camera with big camera capabilities. Each component of the MicroLine camera is designed and manufactured for a long life in the most demanding conditions. MicroLine download speeds are fast yet maintain the 16-bit resolution necessary to produce high quality images. The MicroLine ML23042 camera can achieve up to 50°C below ambient cooling without water assist. Simply set the MicroLine cooling where you want it and the camera will do the rest, quickly and without worries.



Applications

- Astronomy
- Bioluminescence
- Chemiluminescence
- Forensic Imaging
- Satellite Imaging
- Low Light Level Imaging

Features	Benefits
Up to 2 MHz digitization	Fast Image capture with full 16-bit resolution
2048 x 2048 Array with 15 μm pixels	Resolves fine detail
Flexible binning and readout	Increases frame rate
Thermoelectric Cooling to 50°C Below Ambient	Excellent low-noise imaging
Excellent quantum efficiency	High sensitivity for fast image acquisition
Optional Nikon F-mount or Canon EOS mount	Wide variety of optical choices
Acquisition software included	Ease of integration with open source SDK
USB 2.0 interface	Industry standard connectivity; fast data transfer



Engineering Excellence

Because Your Image Depends On It.

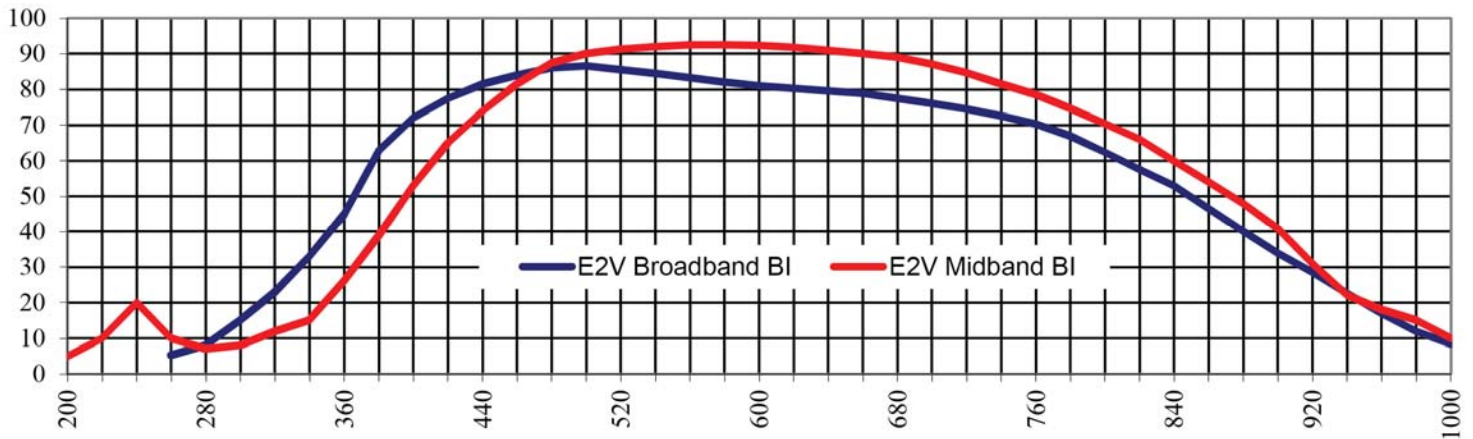
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*Due to continuous development, all specifications subject to change without notice.

Sensor Specifications (from manufacturer)

Sensor	e2v CCD230-42-1-143 (MB); CCD230-42-1-E10 (BB)				
Pixels	2048 x 2048	Sensor Size	30.7 X 30.7 mm	Megapixels	4.2
Pixel Size	15 μ m	Sensor Diagonal	43.4 mm	Video Size (inch)	2.7
Full Well Capacity	150000 electrons	CCD Variants	Midband; Broadband		
Color Options	Monochrome only	CCD Grades	1		
CCD Type	Full frame	Anti-Blooming	NA		

Sensor Quantum Efficiency (Absolute)



Camera Performance

Typical Maximum Cooling	50°C below ambient	Dark Current (typical)	0.4 electrons/pixel/sec at -30°C
Temperature Stability	0.1°C	Cooling Method	Air (Optional liquid)
Digitization Speed	750 kHz & 2 MHz		
Typical System Noise	16e at 750 kHz; 24e at 2 MHz	Non-Linearity	<1%
Focal Plane to Face Plate	21 mm (optical)	Weight	4.5 lbs (2 kg)
Typical Gain	2.5e-/ADU	Housing	3.7 X 3.7 X 4.77 inches (9.3 X 9.3 X 12.1 cm)
Lens Mounts	Optional Nikon F-mount or Canon EOS mount		
Interface	USB 2.0	Camera Channels	1; optional 2 or 4
Available Shutters	65 mm		
External Triggering	Standard		1000000
Environment	-30°C to 45°C 10% - 90% Relative Humidity		
Power	12V (100-240V AC to 12V DC power supply included). With TEC off: <1A. TEC at 100%: 4.4A. Shutter open: 4A pulse for 100msec. Shutter held open, add 0.22A.		



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