

MicroLine ML1603

Quality. Cooled. Cameras.

1536 x 1024 Front Illuminated CCD

9 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. MicroLine cameras can achieve up to 60°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.



ML1603 with C-mount & FLI Dovetail

Applications

- Digital Radiography
- Astronomy
- Bioluminescence
- Chemiluminescence
- Gel Documentation
- Forensic Imaging
- Satellite Imaging
- Low Light Level Imaging

Features	Benefits
1 MHz and 7 MHz digitization	Fast Image capture with full 16-bit resolution
1536 x 1024 Array with 9 μm pixels	Resolves fine detail
Flexible binning and readout	Increases frame rate
Thermoelectric Cooling to 60°C Below Ambient	Excellent low-noise imaging
Excellent quantum efficiency	High sensitivity for fast image acquisition
C-mount; optional Nikon or Canon lens 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.

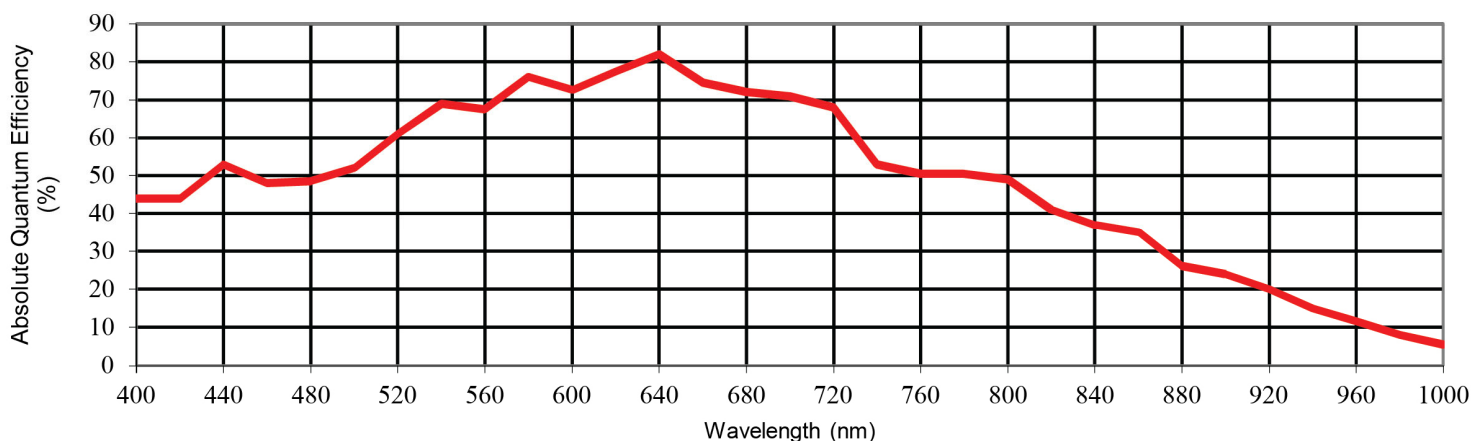
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*Due to continuous development, all specifications subject to change without notice.

Sensor Specifications (from manufacturer)

Sensor	On Semi KAF-1603ME Front Illuminated CCD	Sensor Size	13.8 X 9.2 mm	Megapixels	
Pixels	1536 x 1024	Sensor Diagonal	16.5 mm	Video Size (inch)	1"
Pixel Size	9 x 9 μ m	Sensor Area	126.9 mm ²	Sensor Grades	2
Full Well Capacity	100,000 electrons				
Anti-Blooming	None				
Variants					

Sensor Quantum Efficiency (Absolute)



Camera Performance

Typical Maximum Cooling	60°C below ambient	Dark Current (typical)	<0.015 eps at -25°C
Temperature Stability	0.1°C	Cooling Method	Air (Optional liquid)
Digitization Speed	1 MHz and 7 MHz		
Typical System Noise	15e- at 1 MHz; 35e- at 7 MHz	Non-Linearity	<1%
Focal Plane to Face Plate	15.7mm	Typical Gain	1.45e-/ADU
Housing	3.7 X 3.7 X 4.77 inches (9.3 X 9.3 X 12.1 cm)	Weight	2.8 lbs (1.2 kg)
Lens Mounts	C-mount; optional Nikon or Canon lens mount		
Interface	USB 2.0	Camera Channels	1
Available Shutters	25mm		
External Triggering	Standard		
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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