3296 x 2472 Imaging Array

5.5 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.



Applications

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

Features	Benefits
1.5 MHz & 12 MHz Digitization	Fast Image capture with full 16-bit resolution
3296 x 2472 Array with 5.5 μm pixels	Resolves fine detail
Flexible binning and readout	Increases frame rate
Thermoelectric Cooling to 55°C Below Ambient	Excellent low-noise imaging
Excellent quantum efficiency	High sensitivity for fast image acquisition
Optional Micro 4/3; Nikon F-mount; Canon EOS	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



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Sensor Specifications (from manufacturer)

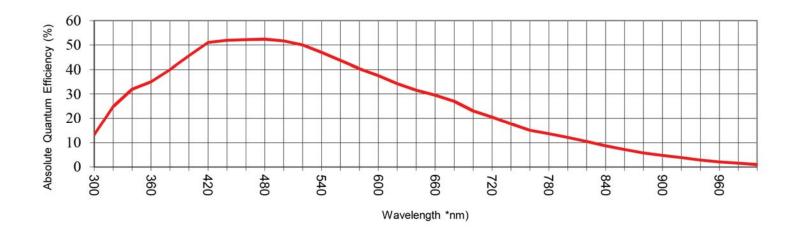
Sensor On Semi KAI-08051

Pixels3296 x 2472Sensor Size18.1 X 13.5 mmMegapixels8Pixel Size5.5 μmSensor Diagonal22.5 mmVideo Size (inch)1.4

Full Well Capacity 20,000 electrons CCD Variants

Color Options Mono or Color CCD Grades Standard
CCD Type Interline transfer Anti-Blooming 300x

Sensor Quantum Efficiency (Absolute)



Camera Performance

Typical Maximum Cooling 55°C below ambient Dark Current (typical) 0.001 electrons/pixel/sec at -30°C

Temperature Stability 0.1°C Cooling Method Air (Optional liquid)

Digitization Speed 1.5 MHz & 12 MHz (optional two channels @ 10 MHz each)

Typical System Noise 3.5e- RMS @ 1.5 MHz; 6e- RMS @ 12 MHz Non-Linearity <1%

Focal Plane to Face Plate 15.7 mm optical

Weight 2.8 lbs (1.2 kg)

Typical Gain Housing 3.7 X 3.7 X 4.77 inches (9.3 X 9.3 X 12.1 cm)

Lens Mounts Optional Micro 4/3; Nikon F-mount; Canon EOS

Interface USB 2.0 Camera Channels 1 (optional 2)

Available Shutters Electronic shutter standard; optional 25 or 45 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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