318CU

USB 2.0 CMOS 3MP Camera

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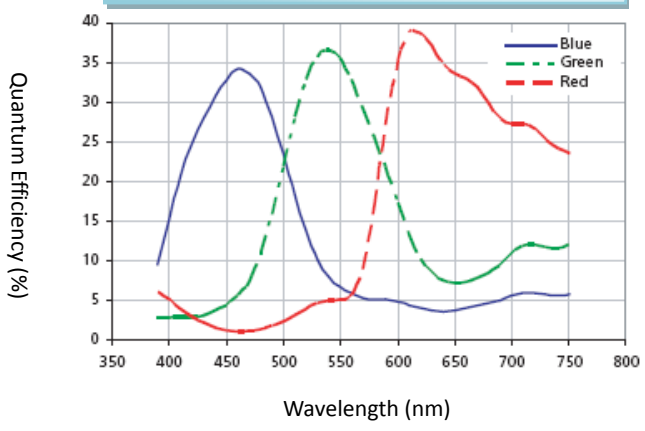
Scientific Instrument Software Corporation Limited

318CU

USB 2.0 Bulk-Transfer Camera

Resolution	**3-megapixel**
Power	USB Single Cable Bus Power
Bit Depth	10-bit Digitization
	8-bit Uncompressed Output
Master Clock	24MHz
Enclosure	Aluminum Machined
Microscope Interfacing Connection Type	C-mount
Recommended Video Adaptor	0.5x
Sensor Technology	CMOS
Pixel Array	2048H x 1536V Arbitrary Simultaneous Windowing, Binning and Sub-sampling
Sensitivity	1.0V/Lux-Second at 550nm
Pixel Size	3.2µm x 3.2µm
Signal-to-Noise Ratio	43dB
Imaging Area	6.55mm x 4.92mm
	8.19mm Diagonal
Shutter Type	Electronic Rolling Shutter
Frame Rate	6FPS at Full Resolution
	21FPS at Half Resolution
Maximum Exposure Time	160ms
OS Compatibility	Windows Vista
	Windows XP
Software Compatibility	X18CU SDK
	TWAIN
	DirectShow
	Micrometrics LE
	Micrometrics SE Premium
	Micrometrics BE (Special Long-Exposure Mode)

Quantum Efficiency vs. Wavelength



Based on Micron's

*Digital***Clarity**™ CMOS Sensors

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MICROMETRICS

Correct Optically

Standard cameras are configured to accept lights of wavelengths between 400nm and 645nm. Optional infrared filters that cut off at 680nm and all-pass filters that are transmission-enhanced will be supplied upon request to accommodate unique applications

Cool by Design

- *Multi-board architecture isolates analog front end from heat-prone components.*
- *Host computer shares the intensive computations to lower the power requirement of on-board image processing.*
- *Spacious metal enclosure assimilates and dissipates heat effectively.*

Colorific through Computing

- *Anti-aliasing Bayer filter delivers crystalline pictures in both photomicrography and photomacrography.*
- *Extensive enhancements apply to both live and still images*
- *Flat-Field Correction™ removes the effects of vignetting or any undesirable shading.*

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MICROMETRICS

Master Clock. *Higher frequencies generally lead to higher frame rates but noisier images. For rolling-shutter sensors higher frequencies also means shorter integration time. Micrometrics® USB 2.0 cameras are clocked around 24MHz for optimal balance of communication bandwidth, preview speed, image quality and exposure range*

Bit Depth. *Digitization in more than 8 bits enables sophisticated image processing, resulting in fine tones rendered accurately. Most Micrometrics® cameras quantify images by 12 bits. Some models even transfer 36bpp images to host computer for further enhancements that may not be possibly done on-board*

USB 2.0 Bulk Transfer

- Hardware detection and retry mechanism for erroneously transmitted data efficiently guarantees image accuracy.
- On-board frame buffers circumvent instant bandwidth bottlenecks to ensure high throughput and smooth video

Assembling a Micrometrics® camera requires more than class 100 clean rooms. Proprietary software aids our meticulous workers in detecting dust particles, sensor cover glass blemishes, malfunctioning pixels, and any other imperfections of camera components. Specially made tools and instruments are deployed in each link of the manufacture and cleaning processes to ensure final products meet our quality standard. Independent hermetic chamber within camera enclosure provides lasting shield of the sensitive imager from otherwise inevitable contamination in years of practical use of the camera.

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