

Cooled sCMOS Camera



Quantitative fluorescence microscopy and spectroscopy imaging

The cameras are operated with open software and do not require a frame grabber.

They come as a straightforward and affordable upgrade to existing cooled CCD camera systems struggling to deliver high dynamic range, high resolution and high frame rate all at the same time.

Compliance with Gigabit Ethernet Vision (GEV) standard allows operation with multiple platforms (Windows, Linux) and GEV compliant SDKs. OEM versions with special form factors / cooling options are available for integration into specific instruments / systems. Demonstration cameras can be loaned on request.

Key Features

- | Realtime acquisition of 16 bit digitized image
- | Single electron read out noise
- | Very high dynamic range up to 25000:1
- | Genicam compliance
- | Quantum Efficiency > 90 % at 600 nm
- | On-chip corrections and auto exposure
- | 30fps with Camera Link
- | Based on second generation sensors

Applications

Photoluminescence for solar cells

Laser induced breakdown spectroscopy

Low light level surveillance

Fluorescence lifetime detection

Confocal microscopy imaging

Single molecule detection / TIRF

Colour calibration

Astronomy

Hyperspectral imaging

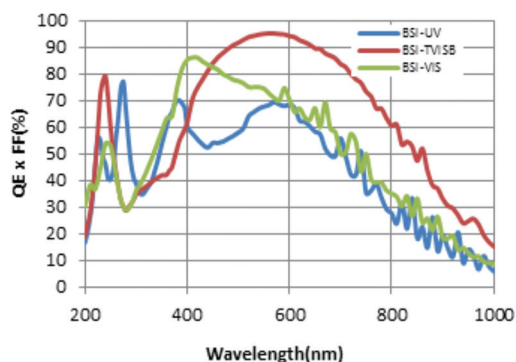
Ophthalmology

Particle imaging velocimetry

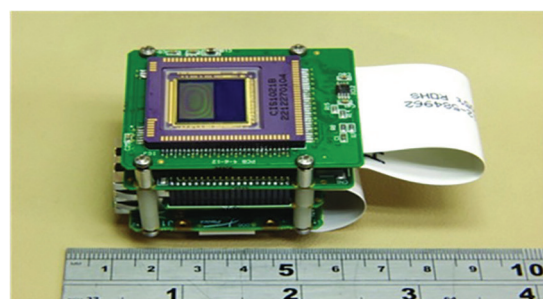
Laser range gated imaging

Cooled sCMOS Camera

Characteristics	sCMOS 4.2	sCMOS 16.4
Resolution	2048 x 2048	4096 x 4096
Pixel Size (µm)	11 x 11	9 x 9
Frame Rate	18/24	4.5/10
Full Well Capacity	80,000 electrons	
Read Out Noise	<2 electrons rms	<4 electrons rms
Dark Current	<2 electron/pixel/second	<1 electron/pixel/second
Sensor Temperature (°C)	Operating at -20°C	
Digitization	16-bit	
QE at 650nm	>90%	>70%
Non Uniformity Corrections	Software corrections	
Camera Interface	Camera link / Gigabit Ethernet	
Type of Shutter	Rolling shutter	
Optical Interface	Micro 4/3	F-mount



Quantum efficiency Cooled sCMOS camera



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