PHOTONIC
SCIENCE

Cooled sCMOS Camera 4MP

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

Confocalmicroscopy imaging

Single molecule detection / TIRF

Colour calibration

Astronomy

Hyperspectral imaging

Ophthalmology

Particle imaging velocimetry

Laser range gated imaging

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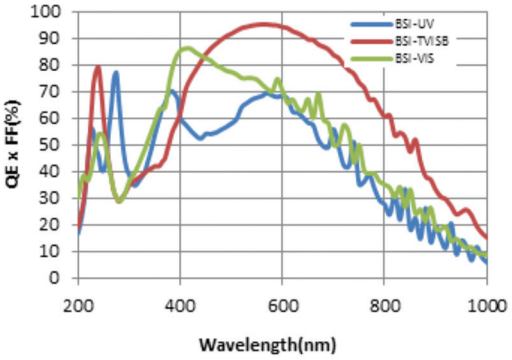
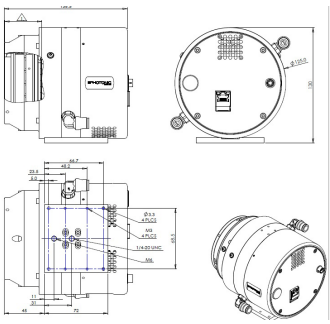
Characteristics	sCMOS 4.2
Resolution	2048 x 2048
Pixel Size (µm)	11 x 11
Frame Rate	18/24
Full Well Capacity	80,000 electrons
Read Out Noise	<2 electrons rms
Dark Current	<2 electron/pixel/second
Sensor Temperature (°C)	Operating at -20°C
Digitization	16-bit
QE at 650nm	>90%
Non Uniformity Corrections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



Quantum efficiency Cooled sCMOS camera



Camera drawing

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