

Scientific Interline EMCCD

Key Features and Benefits

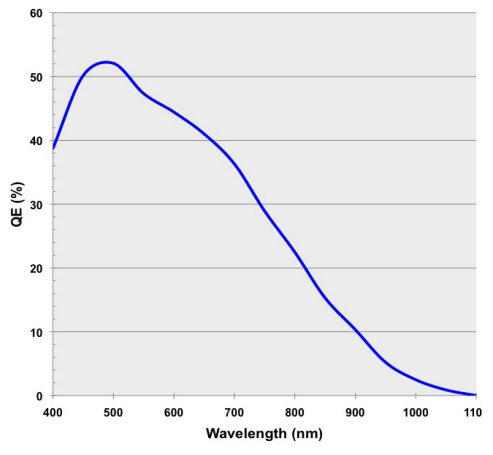
Ultra low noise readout for improved image quality!

- **658 x 496 EMCCD sensor**
Enables optimum image resolution in low light imaging applications
- **B/W EMCCD technology**
Enables high sensitivity imaging with up to 1000x on-chip gain
- **16 bit CameraLink output**
Provides wide dynamic range
- **53% QE from Virtual Phase sensor**
Optimum Photon collection
- **Frame Interline Transfer (FIT)**
No mechanical shutter required, less smear at shorter exposures
- **High frame rate imaging**
Enables capture of fast events

Resolution	658 x 496
Readout Noise	<1e Noise
Frame Rate	50Hz
CameraLink	16 bit



Quantum Efficiency



Sample Applications

- Adaptive Optics and Astronomy
- Calcium signaling
- Fluorescence imaging / spectroscopy
- Flow cytometry
- FRET / FRAP / TIRF
- Genome sequencing
- High content screening
- High resolution fluorescence imaging
- Hyperspectral imaging
- LIBS
- Live cell imaging
- Single molecule detection
- Solar cell inspection
- X-ray tomography



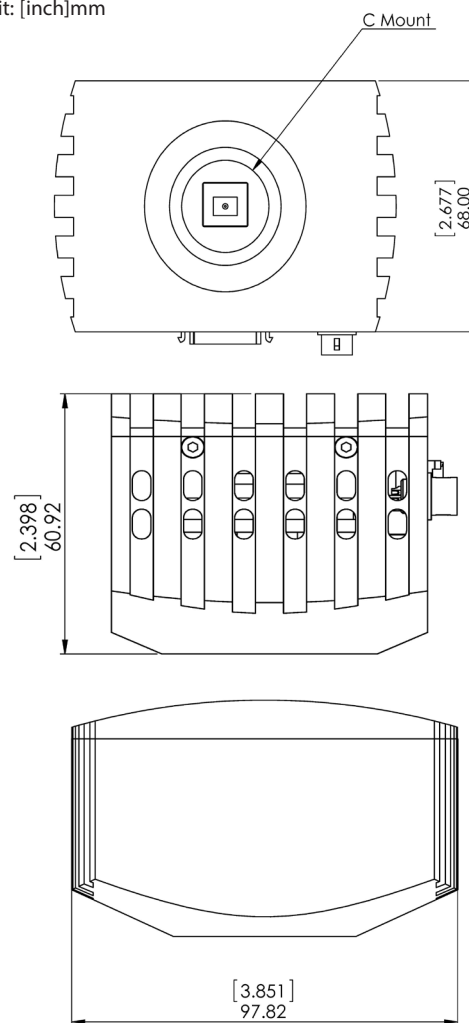
Specifications for AToR

Sensor	Texas Instruments TC247SPD
Sensor Type	1/2" Frame Interline Transfer (FIT)
Active Pixel	658 x 496
Pixel Size	10µm x 10µm
Active Area	6.58mm x 4.96mm
Full Well Capacity	24,000 electrons
Shift Register Well Depth	100,000 electrons
Non Linearity	<1%
Readout Noise	<1 electrons with EM gain ON <20 electrons with EM gain OFF
Dynamic Range	89dB
Frame Rate	50Hz
Dark Current	<1e / pix / sec
Digital Output Format	16 bit CameraLink (base configuration)
Peak Quantum Efficiency	53% @ 530nm
Spectral Response	350 - 1100nm
Cooling	-20°C with ambient air @ +20°C
Binning	1x1, 2x2, 3x3, 4x4, 5x5
Antiblooming Protection	Yes
Lens Mount	C mount
Synchronization	Trigger IN and OUT - TTL compatible
Power Supply	12V DC ± 10%
Total Power Consumption	<12W
Operation Case Temperature	-20°C to +55°C
Storage Temperature	-30°C to +85°C
Dimensions	97mm x 68mm x 61mm
Weight (no lens)	<550g

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Dimensions

Unit: [inch]mm



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