ProLine PL4240 AM

Quality. Cooled. Cameras.

2048 x 2048 Imaging Array

13.5 µm Pixel Size

ProLine sets the standards in key performance areas that include: download speeds, cooling, low noise operation, anti-ghosting technology, image quality, and linearity. ProLine achieves outstanding cooling without water assist. Simply set the ProLine cooling where you want it and the camera will do the rest -- quickly and without worries.

This version of the PL4240 uses a back-illuminated sensor on deep depletion silicon with an enhanced multilayer coating, giving high quantum efficiency across the visible and into the near infrared. Deep depletion silicon has substantially higher dark current than standard silicon.

Applications

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

Features	Benefits
500 kHz and 2 MHz digitization	Fast Image capture with full 16-bit resolution
2048 x 2048 Array with 13.5 µm pixels	Resolves fine detail
Flexible binning and readout	Increases frame rate
Thermoelectric Cooling to 60°C Below Ambient	Excellent low-noise imaging
Excellent quantum efficiency	High sensitivity for fast image acquisition
Optional Nikon or Canon lens mount	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

FLI™
Finger Lakes Instrumentation

Engineering Excellence

Because Your Image Depends On It.

1250 Rochester St.
Lima NY 14485 · USA
585 624 3760
sales@flicamera.com
www.flicamera.com

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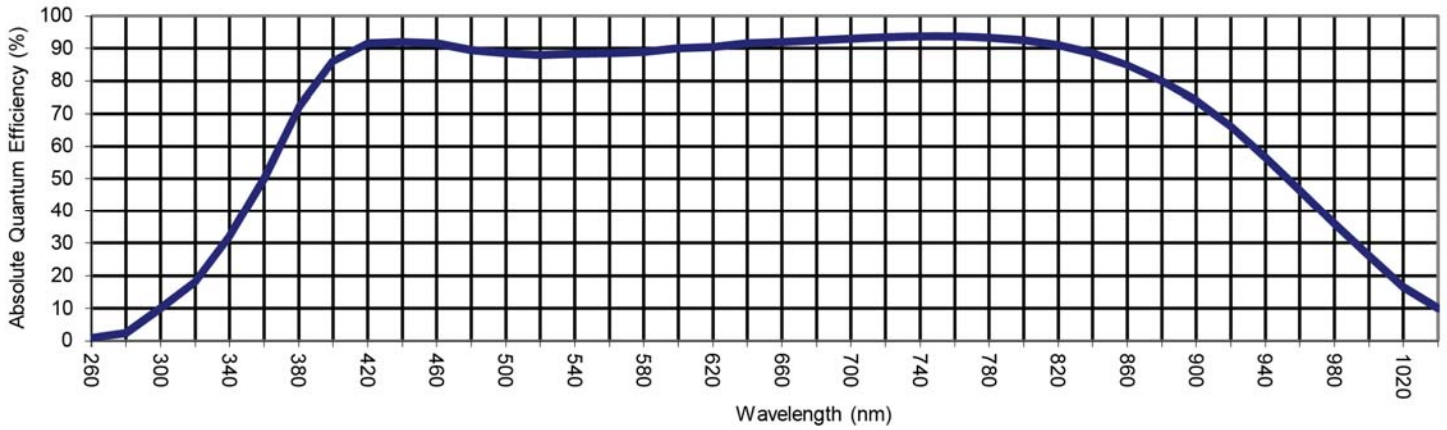
Sensor Specifications (from manufacturer)

Sensor	e2v CCD42-40-1-S04 (Deep Depletion with Astro Multilayer-2 coating)				
Pixels	2048 x 2048	**Sensor Size**	27.6 X 27.6 mm	**Megapixels**	13.5 µm
Pixel Size	13.5 µm	**Sensor Diagonal**	39 mm	**Video Size (inch)**	2.4
Full Well Capacity	100000 electrons	**CCD Variants**			
Color Options	Grade 1	**CCD Grades**	1		
CCD Type	Full frame	**Anti-Blooming**	NA		

Sensor Quantum Efficiency (Absolute)



Camera Performance

Typical Maximum Cooling	60°C below ambient	**Dark Current (typical)**	15 electrons/pixel/sec at -40°C
Temperature Stability	0.1°C	**Cooling Method**	Air (Optional liquid)
Digitization Speed	500 kHz and 2MHz (up to 2 channels at 3 MHz each)		
Typical System Noise	10 e- at 500 kHz; 14 e- at 2 MHz	**Non-Linearity**	<1%
Focal Plane to Face Plate	15.7 mm	**Weight**	2.8 lbs (1.2 kg)
Typical Gain	1.7 e-/count	**Housing**	3.7 X 3.7 X 4.77 inches (9.3 X 9.3 X 12.1 cm)
Lens Mounts	Optional Nikon or Canon		
Interface	USB 2.0	**Camera Channels**	1
Available Shutters	45 mm		
External Triggering	Standard	**Shutter MTBF**	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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