nüvü cameras

every photon counts

h·nü 240

BUILT FOR ADAPTIVE OPTICS

OVER 3000 FPS FULL FRAME, IMAGING EVEN IN NEAR-TOTAL DARKNESS

RETHINK EMCCD

A NEW STANDARD FOR LOW LIGHT IMAGING

OUTSTANDING SNR THANKS TO

Patented electronics decreasing inherent EMCCD camera noise for true photon counting

Lowest background signal and highest electron-multiplying (EM) gain, up to 5000, in inverted mode of operation (IMO) for optimal results in ultra low-light conditions

Sealed body with fully liquid cooling to prevent unwanted airflow while eliminating thermal gradients

Run at higher frame rates to outpace the changing atmosphere with a resolution critical to focal plane wavefront sensing

FASTER ACQUISITIONS, thanks to frame rates up to 3015 fps in full frame and 35.5 µs first pixel latency at 30 MHz readout rate with ULTIMATE SENSITIVITY enabling highly efficient low-flux imaging

SUPERIOR IMAGE QUALITY thanks to greater charge transfer efficiency

NO NOISE-FILTERING ALGORITHMS the amount of noise generated is simply lower, eliminating the risk of removing genuine photoelectrons

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CHARACTERISTICS	SPECIFICATIONS
Sensor	CCD220
Imaging Area	240 x 240 pixels 24 µm x 24 µm pixel area
Outputs	8
Readout Rate	30 MHz
Frame Rate	up to 3015 fps full frame
First Pixel Latency**	35.5 µs
Maximum EM Gain	5000
Effective Readout Noise*	< 0.2 e with EM gain
Cooling Temperature	-45°C
Background Signal*	< 0.003 e/pixel/frame at EM Gain 1000
Charge Transfer Efficiency	> 0.99997
Linearity	< 1%
Triggering Options	Internal or Exernal
Quantization	14 bits

* Data measured at 30 MHz, 3015 fps.

**From end of exposure trigger. Lower latency available with windowing.

QUALITY PRIORITY

All parts are treated in compliance with the highest requirements and assembled in a Class 10,000 cleanroom to ensure the longest lifetime without maintenance. All our cameras come with a standard 2 year warranty.

COMPUTER REQUIREMENTS:

› Communication interface: PCIe Camera Link Extended Full

› Operating system: Windows (XP, 7 & 10) and Linux (CentOS & Ubuntu)

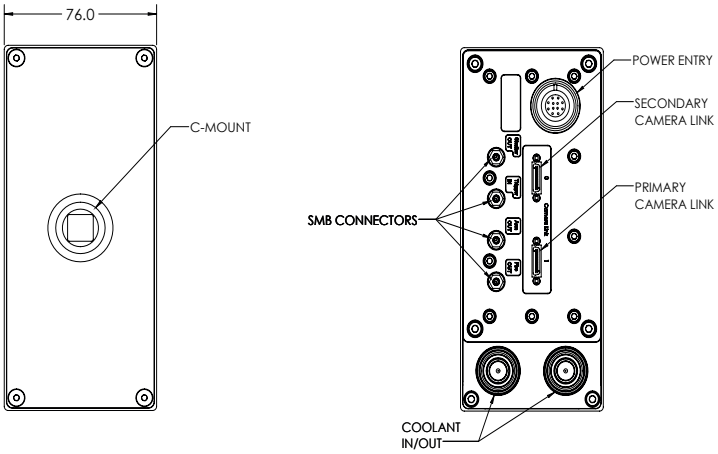
CAMERA ENVIRONMENT:

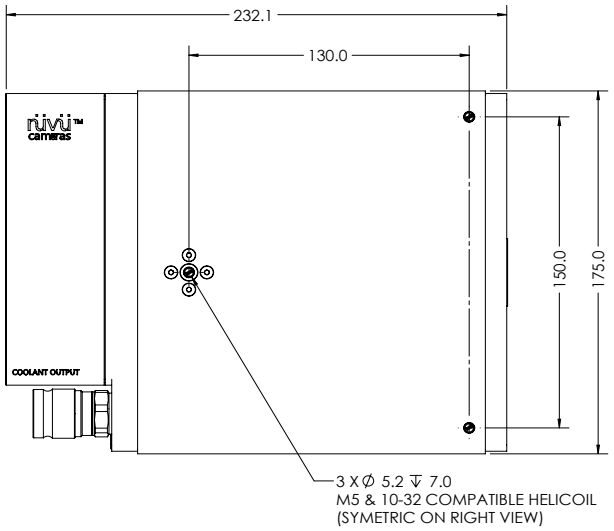
› Operating temperature: 0°C to 30°C

› Humidity: < 90 % (non-condensing)

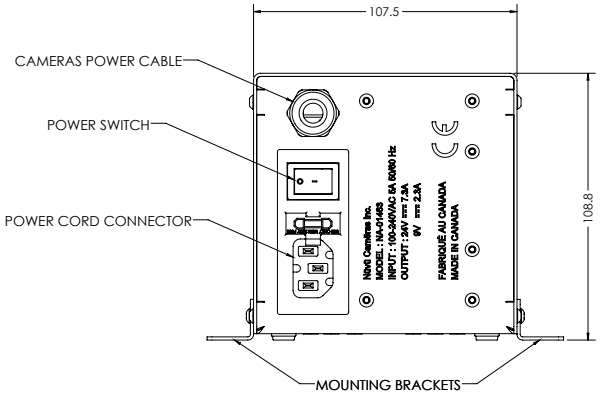
› Power Input: 100 – 240 V, 50 – 60 Hz, max. 3 A

TECHNICAL DRAWINGS





Power supply



FEATURES

FOR FASTER ACQUISITION AND FOR MORE VERSATILITY:

› Liquid chiller accessory
› Vacuum compatible cooling
› Regions of Interest (ROI)
› Binning

TYPICAL QUANTUM EFFICIENCY

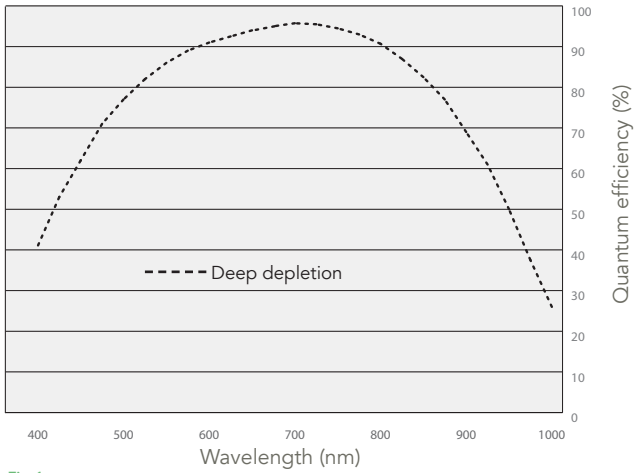


Fig 1.
Typical spectral response as a function of wavelength, as specified by the detector manufacturer

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HNü 240 Specification Sheet 3.2

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