LANSIS 471 CCD CAMERA

KEY FEATURES

- Back-Illuminated imaging CCD sensor
- 13.3 x 13.3 mm sensor area
- 1024 x 1024 pixel array
- 13 µm pixels
- Up to 95% Quantum Efficiency
- High sensitivity 400-900 nm
- 100k e^- full-well capacity
- Compact form factor for easy integration
- Liquid cooled to -90°C
- Patented eXcelon® technology for improved QE or Unichrome sensor coatings for higher sensitivity in UV

TYPICAL APPLICATIONS

- Long-exposure imaging
- *In vivo* imaging
- Luminescence & Fluorescence
- Microscopy

RELIABILITY

- One-year warranty
- Permanent vacuum guarantee

High Performance, High Reliability CCD Cameras for OEM and Integration

The LANSIS 471 is a deep cooled CCD camera for use in *in vivo* imaging and other low light conditions requiring long exposures.

The LANSIS camera platform is designed to make integrating Teledyne e2v sensors into other systems effective and easy. Specifically designed for integrators and OEMs, these cameras are a powerful addition to Teledyne's imaging and spectroscopy systems.

Designed and built in the United States, LANSIS CCD cameras are engineered for quality, performance, and compact size. They represent the culmination of high reliability, increased productivity, and low cost, meeting virtually any project or system requirements.

The LANSIS 471 uses a 1k x 1k deep-cooled, back-illuminated, imaging format CCD sensor with 13um pixels, providing a diagonal array size of 18.4 mm. With high QE, low read noise and ultra-low dark current, the LANSIS 471 is ideal for long exposure imaging.

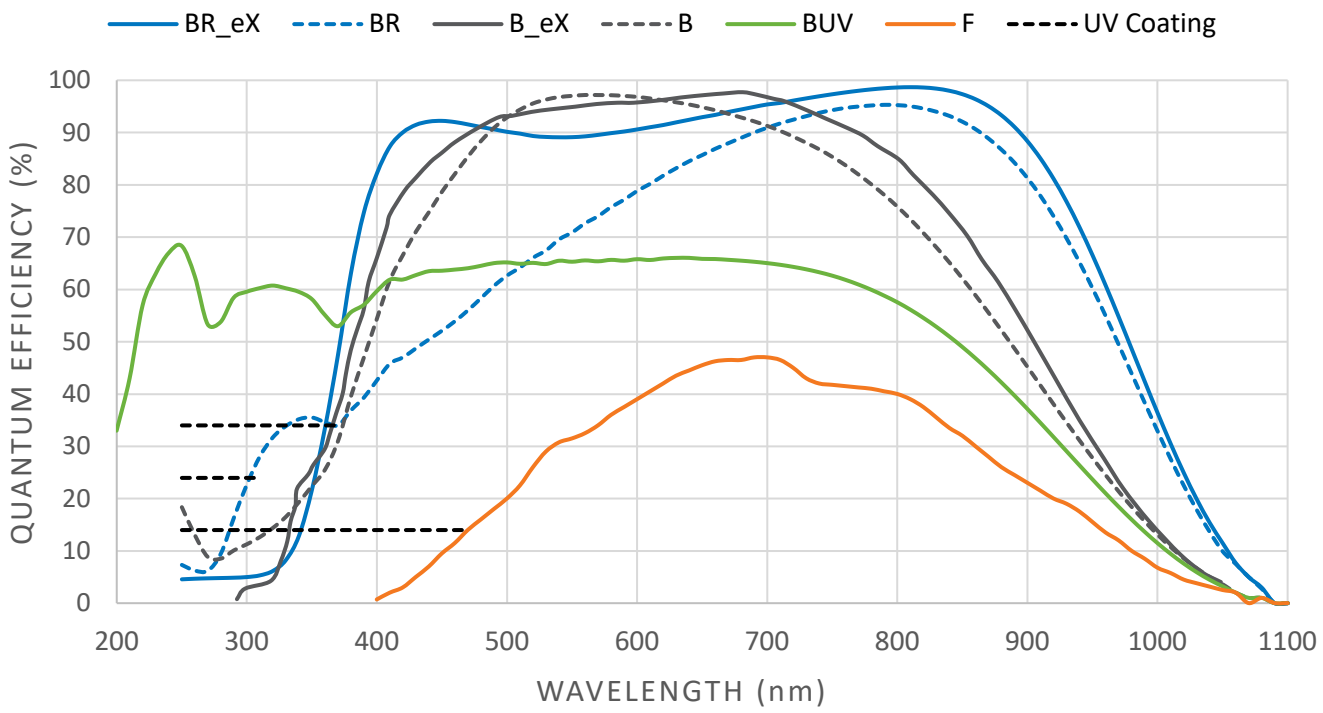
LANSIS 471 SPECIFICATIONS

SPECIFICATIONS	Camera Performance
CCD Sensor Format	Teledyne e2v 47-10 Back-illuminated, AIMO CCD sensor, Grade 1
Active Array Size	1024 x 1024 pixels
Pixel Area	13 µm x 13 µm (169 µm²), 100% pixel fill factor
Sensor Area	13.3 mm x13.3 mm (18.4 mm diagonal)
Spectral Response	250 – 1050 nm
Full Well Capacity	100,000 e^- (typical, low gain)
ADC Rates	100 kHz, 1MHz, or 3 MHz
Linearity	≥ 99%
I/O Signals	MCX to BNC; Trigger-In plus two programmable logic outputs (OUT1, OUT2)
External Trigger Modes	Start on single trigger, readout per trigger, exposure during trigger pulse
Typical System Read Noise (RMS)	≤ 4.0 e^-
Typical Dark Current	< 0.001 e^-/p/sec @ -90 °C
Cooling Temperature	-90 °C (liquid cooled)
Thermostating Precision	± 0.05 °C across temperature range
Vertical Shift Speeds	30 µS default, 19 µS optional
Output Interface	USB 3.2 Gen 1 (5 Gbps)
Digitization	16-bit
Operating Temperature Range	5 °C to 30 °C (non-condensing)
Camera Weight	6.72 lbs, 3.05 kg
Camera Dimensions	151 x 123.5 x 123.5 mm (L x W x D)
Camera Mounts	C-mount standard, other mounts available by special order
Operating Systems	Microsoft® Windows® 10 /11 64-bit, RedHat® Enterprise, Linux® v7 x 64-bit
Certification	FCC Part 15, Subpart B; Class A, CE, UKCA, RoHS 3, PSE, ISO 9001:2015

LANSIS 471 FRAME RATE AT FULL FRAME

Operating Mode	Frame Rate (FPS)	With Binning		
Operating Mode	**1 x 1**	**2 x 2**	**3 x 3**	**4 x 4**
3 MHz, VS = 19 µS	2.54	6.21	13.9	24.1
3 MHz, VS = 30 µS	2.47	5.8	12	18.9
1 MHz, VS = 19 µS	0.893	2.27	5.6	11.5
1 MHz, VS = 30 µS	0.884	2.22	5.27	10.2
100 kHz, VS = 19 µS	0.0908	0.295	0.795	1.88
100 kHz, VS = 30 µS	0.0907	0.294	0.788	1.84

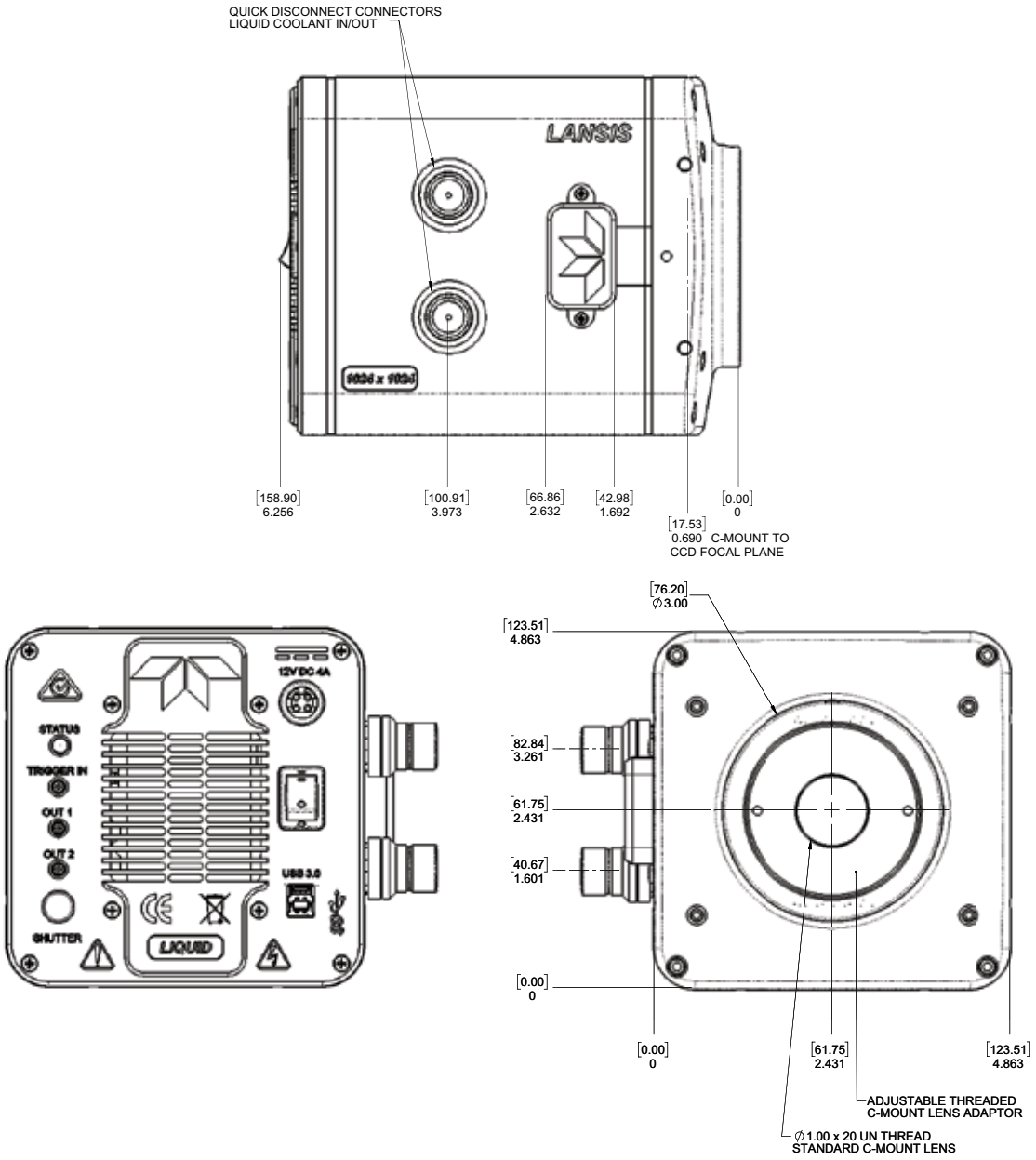
LANSIS 471 CCD COATINGS



LANSIS 471 ACCESSORIES

Accessories		
Power supply/cables	Data acquisition software	External coolant circulator (optional purchase)
MCX to BNC cables (x3)	Certificate of Performance	Coolant hoses (optional purchase)
USB 3.2 interface cable		

LANSIS 471 C-MOUNT DIMENSIONAL OUTLINES (Unit: mm)



FOR MORE INFORMATION REACH OUT ONLINE:

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