

# ACUROS<sup>®</sup> CQD<sup>®</sup> 1920L GigE SWIR Camera

## ACUROS-1920-GIGE-003

The ACUROS CQD L-Series SWIR cameras feature large sensor area, low angular dependence and a longer working distance for highly divergent emitters and collimated beams. Acuros cameras deliver high resolution, high dynamic range and very high detectivity imaging from 400 to 1700 nm. The L-Series cameras are designed for use in laser beam diagnostics, laser beam imaging and laser alignment applications by mitigating interference fringing sources.

Please see the Acuros eSWIR product line for expanded sensitivity capabilities from 400 nm to 2000 nm.

### SPECIFICATIONS

**Table 1. ELECTRO-OPTICAL SPECIFICATIONS**

Parameter	Value/Description
Sensor	ACUROS CQD sensor
Temperature Stabilization	Single-stage thermo-electric cooler
Sensor Array Format	1920 x 1080
Resolution	2.07 MP (megapixel)
Spectral Band	400–1700 nm
Array Size	28.8 mm x 16.2 mm, 33 mm diagonal
Pixel Pitch	15 μm x 15 μm
Max Frame Rate at Full Resolution	58 fps (8, 10, 12, 14 bit)
Pixel Operability	99.9% typical, 99.75% min
Bit Depth	8, 10, 12, 14 bit selectable
Integration Type	Snapshot global shutter
Trigger	External TTL
Integration Time	100 μs to 4 s
Dynamic Range	70 dB typical
Windowing & Windowing Frame Rate	Array centered. Scales inversely to window size
Laser Beam Fringeless Operation	Yes
Binning Arrays	2 x 2, 4 x 4
Non-uniformity Correction	2-point non-uniformity correction
Temporal Dark Noise	80/70/65 e <sup>-</sup> typical
Quantum Efficiency	See typical QE curve (Figure 5)



### ORDERING INFORMATION

Part Number
ACUROS-1920-GIGE-003

### Features

- Large Sensor Size
- Short Working Distance for Highly Divergent Beams
- Low Angular Dependence
- Dynamic Range up to 70 dB
- Linear Photoresponse
- 2.07 MP Resolution
- TEC Cooling
- Low Noise
- GigE Vision
- Visible-SWIR

### Applications

- Laser Beam Diagnostics
- Laser Beam Imaging
- Laser Alignment

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**Table 2. ENVIRONMENTAL & POWER SPECIFICATIONS, TYPICAL PERFORMANCE**

Parameter	Value/Description
Operating Case Temperature	-20 °C to +55 °C
Power Consumption	6.5–12 W depending on TEC settings
Power Supply Voltage	6–16 V dc. POE not supported
Regulatory Compliance	CE mark

**Table 3. MECHANICAL SPECIFICATIONS**

Parameter	Value/Description
Dimensions Excluding Lens	6.1 x 6.1 x 9.1 cm (C-mount)
Weight Excluding Lens	505 grams with (C-mount) adapter
Lens Mounts	Standard mount (C-mount). Inquire for other options.
Power Connector	Hirose 12-pin, HR10A-10R-12PB (71)
Trigger Connector	BNC

**Table 4. SOFTWARE AND USER INTERFACE**

Parameter	Value/Description
Software Development Kit	Windows GUI
GenICam Compliance	Yes
Interface	GigE Vision

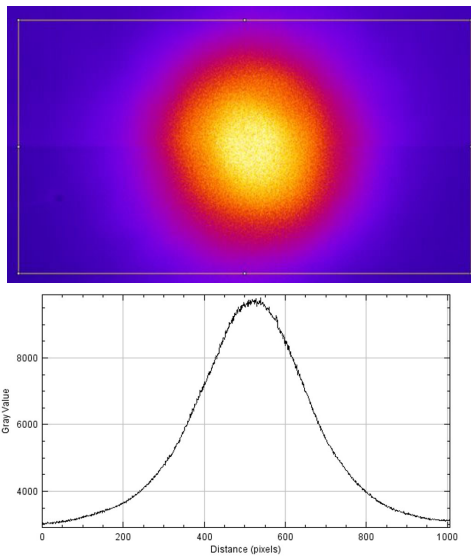


**Figure 1. Lens Mount**



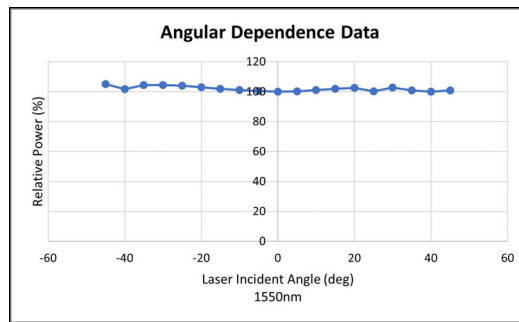
**Figure 2. GigE Vision Interface**

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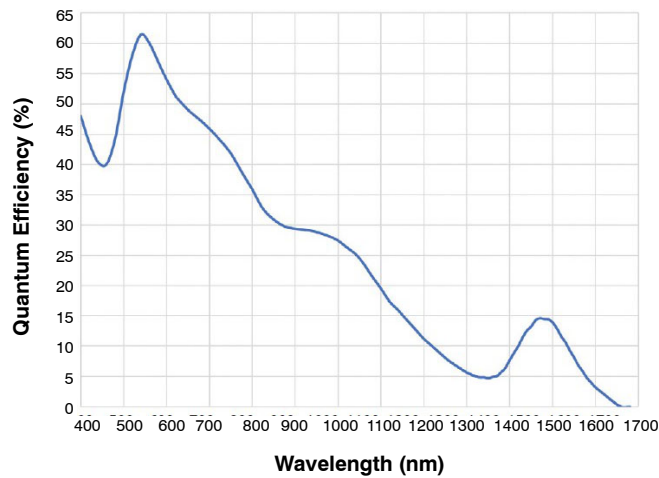


1550 nm Laser image and corresponding line file (false color added post image)

**Figure 3. ACUROS CQD SWIR Camera Image of Laser**



**Figure 4. Angular Dependence Data**



**Figure 5. Typical QE Performance**

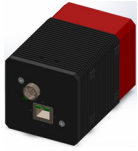
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## REVISION HISTORY

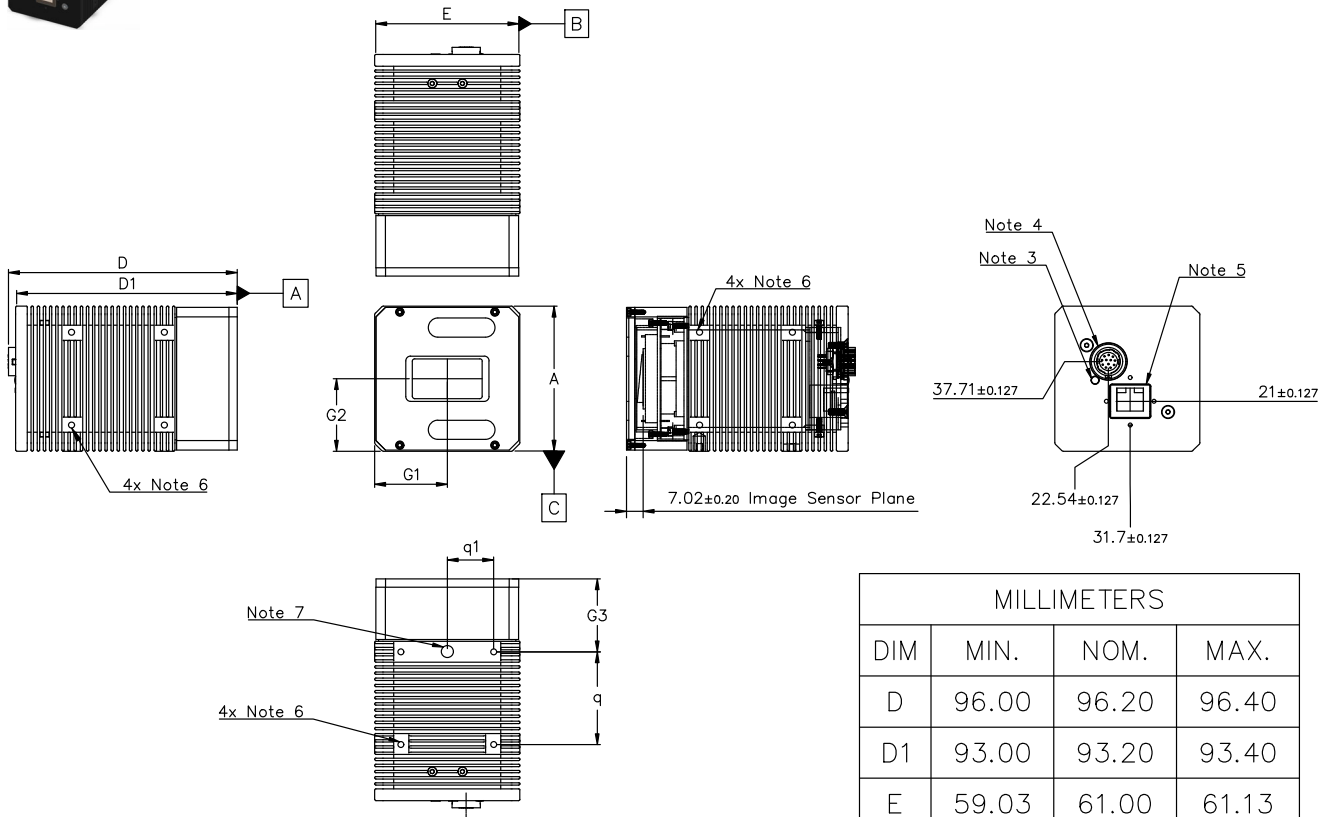
Revision	Description of Changes	Date
2	Removed "eBUS SDK" from Software Development Kit due to change in licensing.	3/16/2026

This document has undergone updates prior to the inclusion of this revision history table. The changes tracked here only reflect updates made on the noted approval dates.



**CMOD 96.20x61.00x61.00**  
**CASE 810AD**  
**ISSUE B**

DATE 27 MAY 2025



**NOTES:**

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M. 2018.
2. CONTROLLING DIMENSION: MILLIMETER
3. POWER INIDCATOR
4. HIROSE 12 PIN CONNECTOR
5. GigE CONNECTOR
6. M3X0.5 DEPTH  $\nabla$  3.0
7. 1/4-20 UNC DEPTH  $\nabla$  5.08

MILLIMETERS			
DIM	MIN.	NOM.	MAX.
D	96.00	96.20	96.40
D1	93.00	93.20	93.40
E	59.03	61.00	61.13
A	59.03	61.00	61.13
G1	30.35	30.48	30.61
G2	30.35	30.48	30.61
G3	30.47	30.60	30.73
q	38.98	39.11	39.24
q1	19.37	19.50	19.63

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