

ACUROS® CQD® 1280 GigE eSWIR Camera

ACUROS-1280-GigE-002

The ACUROS CQD extended SWIR (eSWIR) cameras have sensitivity from 400 nm to 2000 nm. This novel, wide bandwidth capability opens up new applications for chemical sensing, surveillance imaging, plastic sorting, and more. Acuros eSWIR cameras have unmatched SNR without the need for expensive cooling systems.

SPECIFICATIONS

Table 1. ELECTRO-OPTICAL SPECIFICATIONS

Parameter	Value/Description
Sensor	ACUROS CQD sensor
Temperature Stabilization	Single-stage thermo-electric cooler
Sensor Array Format	1280 x 1024
Resolution	1.31 MP (megapixel)
Spectral Band	400–2000 nm
Array Size	19.2 mm x 15.4 mm, 24.6 mm diagonal
Pixel Pitch	15 μ m x 15 μ m
Max Frame Rate at Full Resolution	88 fps (8 bit), 45 fps (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 μ s to 4 s
Dynamic Range	65 dB typical
Windowing	Array centered
Windowing Frame Rate	Scales inversely to window size
Binning Arrays	2 x 2, 4 x 4
Non-uniformity Correction	2-point non-uniformity correction
Temporal Dark Noise	80/70/65 e ⁻ typical
Detectivity	See typical detectivity curve (Figure 4)



ORDERING INFORMATION

Part Number
ACUROS-1280-GigE-002

Features

- HD Resolution
- TEC Cooling
- Low Noise
- Fast Frame Rate
- Visible-eSWIR
- GigE Vision

Applications

- Hydrocarbon Detection
- Chemical Sensing
- Medical Imaging
- Plastic Sorting
- Hyperspectral
- High Resolution
- Thermal Imaging
- Surveillance
- Machine Vision
- Silicon Inspection
- Instrumentation

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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 10.9 cm (C-mount)
Weight Excluding Lens	600 grams with C-mount adapter, 594 g (F-mount)
Lens Mounts	C, F, M42 (C-mount flange-back distance)
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. C-mount, F-mount, and M-42 Lens Mounts



Figure 2. GigE Vision Interface

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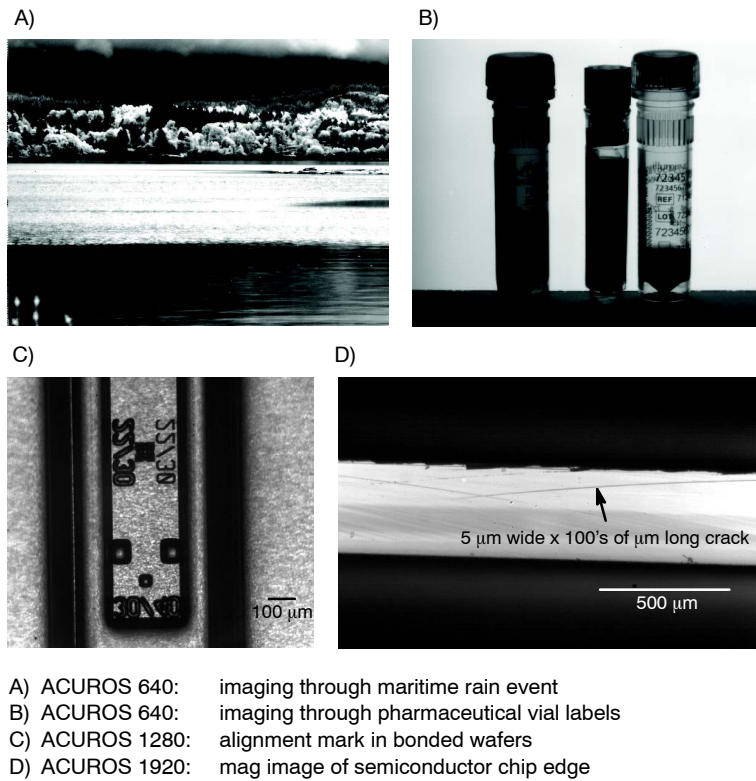


Figure 3. ACUROS CQD SWIR Camera Images

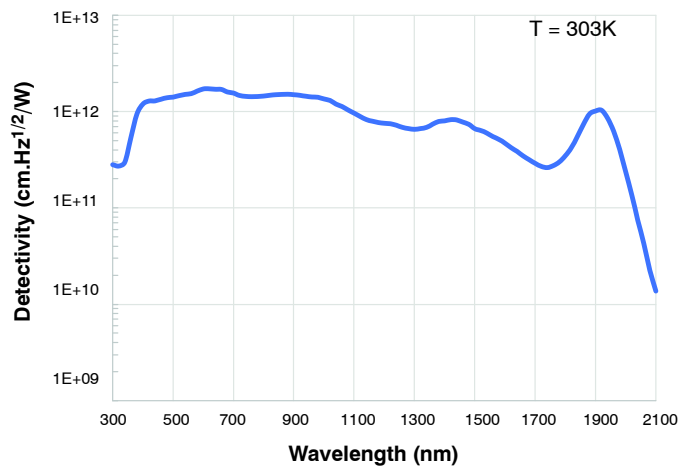


Figure 4. Typical Detectivity Performance

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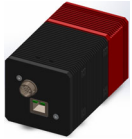
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REVISION HISTORY

Revision	Description of Changes	Date
2	Removed "eBUS SDK" from Software Development Kit due to change in licensing.	3/13/2026

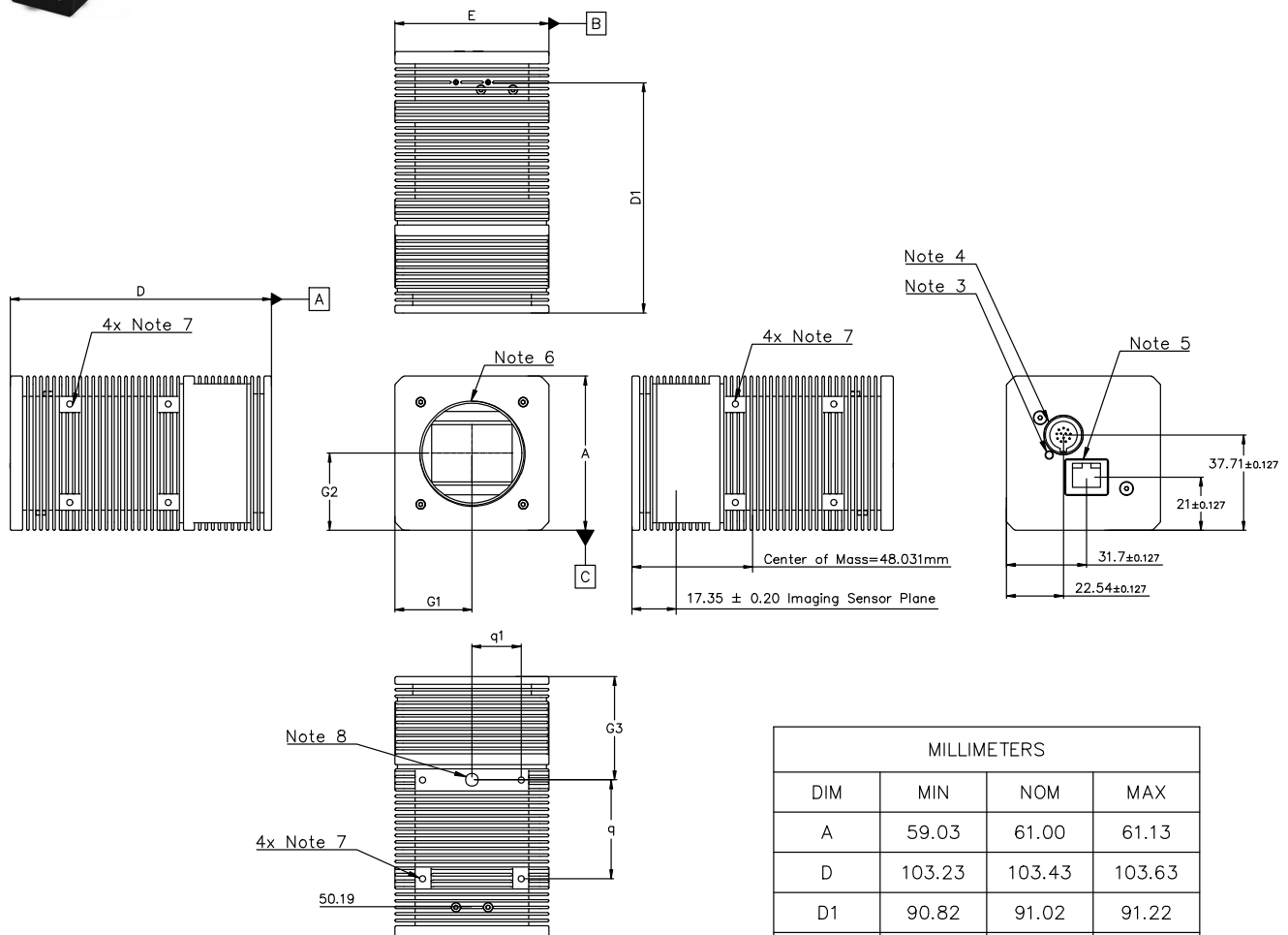
This document has undergone updates prior to the inclusion of this revision history table. The changes tracked here only reflect updates made on the noted approval dates.





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CASE 810AA
ISSUE B

DATE 12 SEP 2025



MILLIMETERS			
DIM	MIN	NOM	MAX
A	59.03	61.00	61.13
D	103.23	103.43	103.63
D1	90.82	91.02	91.22
E	59.03	61.00	61.13
G1	30.37	30.50	30.63
G2	30.37	30.50	30.63
G3	40.70	40.83	40.96
q	38.98	39.11	39.24
q1	19.37	19.50	19.63

- NOTES:
- DIMENSIONING AND TOLERANCING PER ASME Y14.5M. 2018.
 - CONTROLLING DIMENSION: MILLIMETER
 - POWER INDICATOR
 - HIROSE 12 PIN CONNECTOR
 - GigE CONNECTOR
 - M42 MOUNT DEPTH ∇ 9.8
 - M3X0.5 DEPTH ∇ 3.0
 - 1/4-20 UNC DEPTH ∇ 5.08

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