ACUROS® GO SWIR Camera

Advance Information

ACUROSGO-SWIR-6MP

INTRODUCING THE WORLD'S FIRST 6 MP HANDHELD SWIR CAMERA

Advanced SWIR Imaging Meets an Intuitive Handheld Design

Introducing the Acuros GO – your gateway to unparalleled SWIR imaging. Incorporating SWIR Vision Systems' cutting-edge high-resolution CQD SWIR sensor technology, the Acuros GO is a dynamic, handheld camera designed for versatility in the field.

This battery powered, portable SWIR Camera makes the Acuros GO especially useful for imaging through degraded visual environments such as rain, snow, haze, smog, smoke, and dust. When combined with optical filters, the Acuros GO can be used to detect moisture, sugar content, hydrocarbons, and other infrared chemical signatures.

The Acuros GO opens a new world of photographic opportunities with the high resolution Vis-NIR-SWIR CQD sensor!

SPECIFICATIONS

Table 1. CAMERA SPECIFICATIONS

Camera Type	Short Wavelength Infrared Mirrorless Camera
Shutter	Snapshot global shutter
Digital Zoom	Yes
Frame Rate	30 frames per second for video capture
Auto-Exposure	Automated exposure, gain algorithms for dynamic lighting environments
Pixel Correction	Automated non-uniformity algorithms
Focus	Manual focus
Video Recording	HD video saved to microSD and output to micro-HDMI
Monitor	109 mm [4.3"] diagonal high brightness 800 x 480 RGB LCD touchscreen
Camera Controls	Control buttons and touch sensitive viewfinder options menu
Control Functions	Image snapshot, video recording stop/start, digital zoom, playback
Battery Capacity	Estimated minimum of 2 hours, typical usage Scenarios
Recording / Storage Media	MicroSD
Video Out	mini-HDMI
Interface	USB-C
Included Lens	Manual 50 mm, f/2.4, SWIR corrected, M-42 mount at C BWD

This document contains information on a new product. Specifications and information herein are subject to change without notice.

ORDERING INFORMATION

Part Number
ACUROSGO-SWIR-6MP

Features

- 6 MP Resolution
  - 3K x 2k, 7 μm Pixel Sensor Format
- IP65 Reading
  - Rugged Design for the Field
- Battery Powered
  - 2 x 18650 Cells
- Touch Screen
  - Intuitive Menu Navigation
- Digital Zoom
  - Make Every Pixel Count
- Auto-Exposure / Auto-Gain Controls
  - For Dynamic Lighting Environmental
- DVR
  - For Onboard Recording and Playback
- Video and Image Capture
  - With MicroSD Storage

Table 2. SENSOR FEATURES

Parameter	Value/Description	
Type	Acuros 6 CQD sensor	
Pixel PItch	7 μm	
Format	2908 x 2040	
Array Size	20.36 mm x 14.28 mm	
Array Diagonal	24.87 mm	
Shutter	Global Shutter	
Max FPS (full frame)	30 Hz (8 bit)	
Min Exposure Time	10 μs	
Detector Technology	Colloidal quantum dot photodiode	
Detector Type	SWIR	
Spectral Range	400−1700 nm	
QE	>20% @ 1550 nm typical	
Pixel Operability	>99.75% typical	
Dark Noise (at 30 °C)	TBD (e^-/s)	
Dark Noise Doubling Temp	9 °C	
Analog Gain Modes	**Low Gain**	**High Gain**
Read Noise	125 e^-	20 e^-
Well-Depth	350 Ke^-	52 Ke^-
Dynamic Range	48 dB	48 dB
ADC Bit Depth	8-bit	
Region of Interest Yes (8 Row oncrements)	Yes (8 row increments)	
Frame Readout Mode	ITR (with CDS) or IWR (without CDS)	

Table 3. ENVIRONMENTAL & POWER SPECIFICATIONS

Parameter	Value/Description
Sensor Temperature Stabilization	Single-stage TEC
Operating Case Temperature	−20 °C to +55 °C
Storage Temperature	−10 °C to +55 °C
Power	2 x 18650 rechargeable lithium ion batteries
Power Supply Voltage	3.3 V & 1.8 V
Shock, Vibration	MIL-STD-810G
Environmental Survivability	IP65 rating for dust, water ingress protection

Table 4. MECHANICAL SPECIFICATIONS

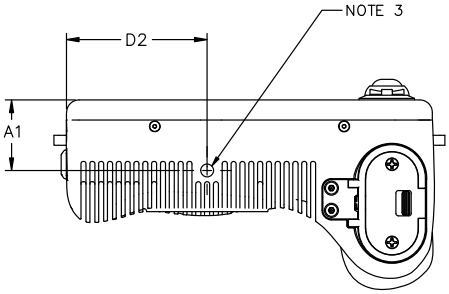
Parameter	Value/Description
Dimensions Excluding Lens	155 x 96 x 76 mm
Weight Excluding Lens	0.9 kg [2 lbs]
Mounting	1/4”−20 thread for tripod and handle mounts
Lens Mount	C-mount or M-42 at C back working distance (BWD)

REVISION HISTORY

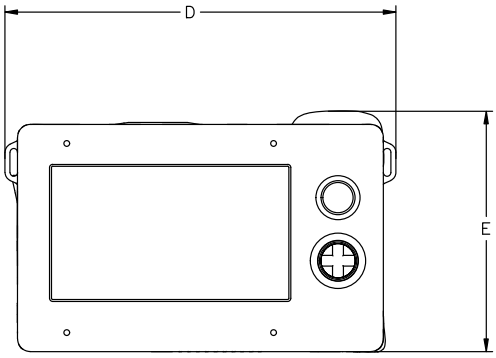
Revision	Description of Changes	Date
P0	Initial Product Preview data sheet release.	04/14/2025
P1	Revision to remove Figure 1.	05/06/2025

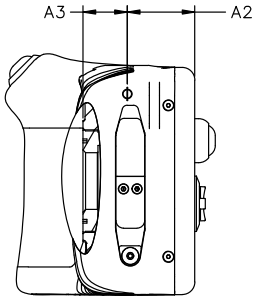
CMOD AcurosGO
CASE 810AK
ISSUE O

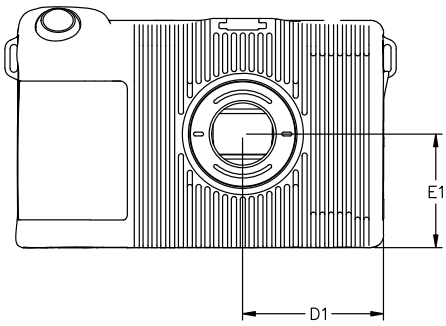
DATE 01 APR 2025

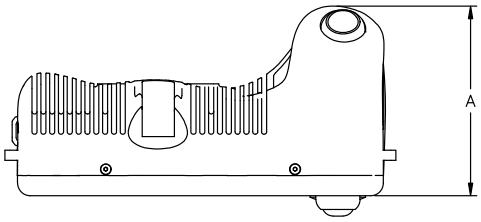


MILLIMETERS			
DIM	MIN	NOM	MAX
A	75.02	75.12	75.22
A1	27.90	28.00	28.10
A2	26.67	26.77	26.87
A3	17.42	17.52	17.62
D	154.90	155.00	155.10
D1	55.71	55.81	55.91
D2	55.65	55.75	55.85
E	95.13	95.23	95.33
E1	44.90	45.00	45.10









NOTES:
1. DIMENSIONING AND TOLERANCING AS PER ASME Y14.5M, 2018.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. 1/4−20 UNC 1B x 15.00/15.00

DOCUMENT NUMBER:	**98AON67240H**	Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.	
DESCRIPTION:	**CMOD AcurosGO**		**PAGE 1 OF 1**

ADDITIONAL INFORMATION

TECHNICAL PUBLICATIONS:
Technical Library: www.onsemi.com/design/resources/technical−documentation
onsemi Website: www.onsemi.com

ONLINE SUPPORT: www.onsemi.com/support
For additional information, please contact your local Sales Representative at www.onsemi.com/support/sales