

# Manta

## G-235



- Latest Sony CMOS sensor
- Power over Ethernet option
- Angled head and board level variants
- Video-iris lens control

## Description

### GigE Vision camera featuring the Sony IMX174 CMOS sensor, Pregius global shutter

Manta G-235B/G-235C is a machine vision camera that incorporates the high quality Type 1/1.2 (13.4 mm diagonal) Sony IMX174 CMOS sensor with Pregius global shutter technology. At full resolution, this camera runs 50.7 frames per second. With a smaller region of interest, higher frame rates are possible. The Manta is one of Allied Vision's versatile GigE Vision cameras with a wide range of features. Particular highlights are the three look-up tables, sophisticated color correction capabilities, a robust metal housing, and many modular options. By default monochrome models ship with protection glass B 270 (ASG) and color models ship with an IRC Hoya C-5000 IR cut filter.

#### Options:

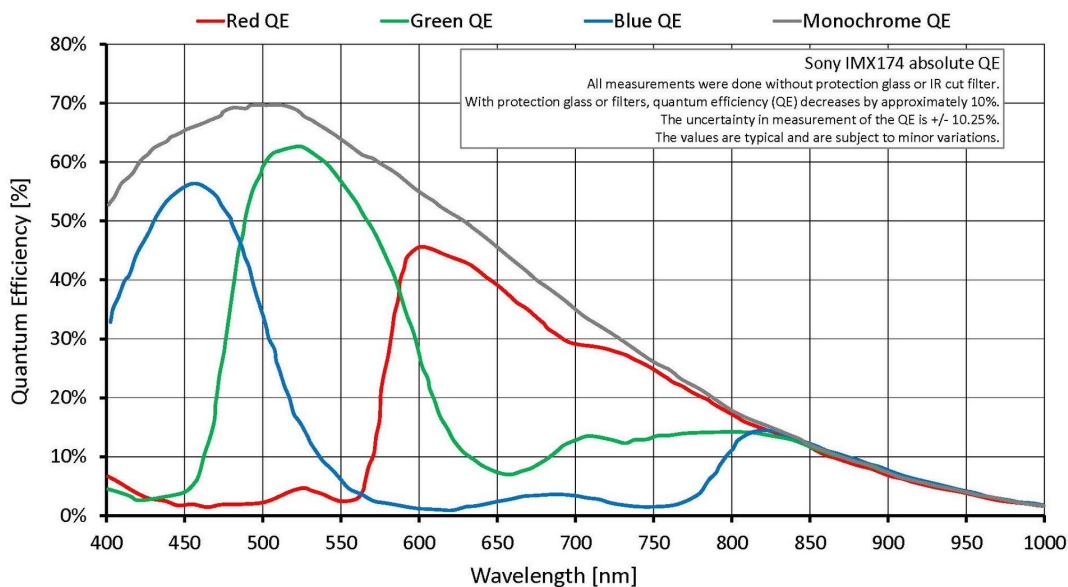
- Power over Ethernet (PoE)
- Various optical filter and lens mounts
- Angled head, board level variants, white medical housing

See the Modular Concept for lens mount, housing variants, optical filters, case design, and other modular options.#

## Specifications

Manta	G-235
Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE) optional
Resolution	1936 (H) × 1216 (V)
Sensor	Sony IMX174
Sensor type	CMOS

Manta	G-235
Cell size	5.86 $\mu\text{m}$ x 5.86 $\mu\text{m}$
Lens mount	C-Mount
Max frame rate at full resolution	50.7 fps
ADC	12 bit
Image buffer (RAM)	128 MByte
<b>Output</b>	
Bit depth	8-12 bit
Mono modes	Mono8, Mono12Packed, Mono12
Color modes YUV	YUV411Packed, YUV422Packed, YUV444Packed
Color modes RGB	RGB8Packed, BGR8Packed
Raw modes	BayerRG8, BayerRG12, BayerRG12Packed
<b>General purpose inputs/outputs (GPIOs)</b>	
Opto-isolated I/Os	2 inputs, 2 outputs
RS-232	1
<b>Operating conditions/dimensions</b>	
Operating temperature	+5 °C to +45 °C ambient (without condensation)
Power requirements (DC)	8 to 30 VDC; PoE
Power consumption (@12 V)	2.8 W @ 12 VDC; 3.3 W PoE
Mass	190 g; 200 g (PoE)
Body dimensions (L x W x H in mm)	86.4 x 44 x 29 (including connectors)
Regulations	CE, RoHS, REACH, WEEE, FCC, ICES





## Features

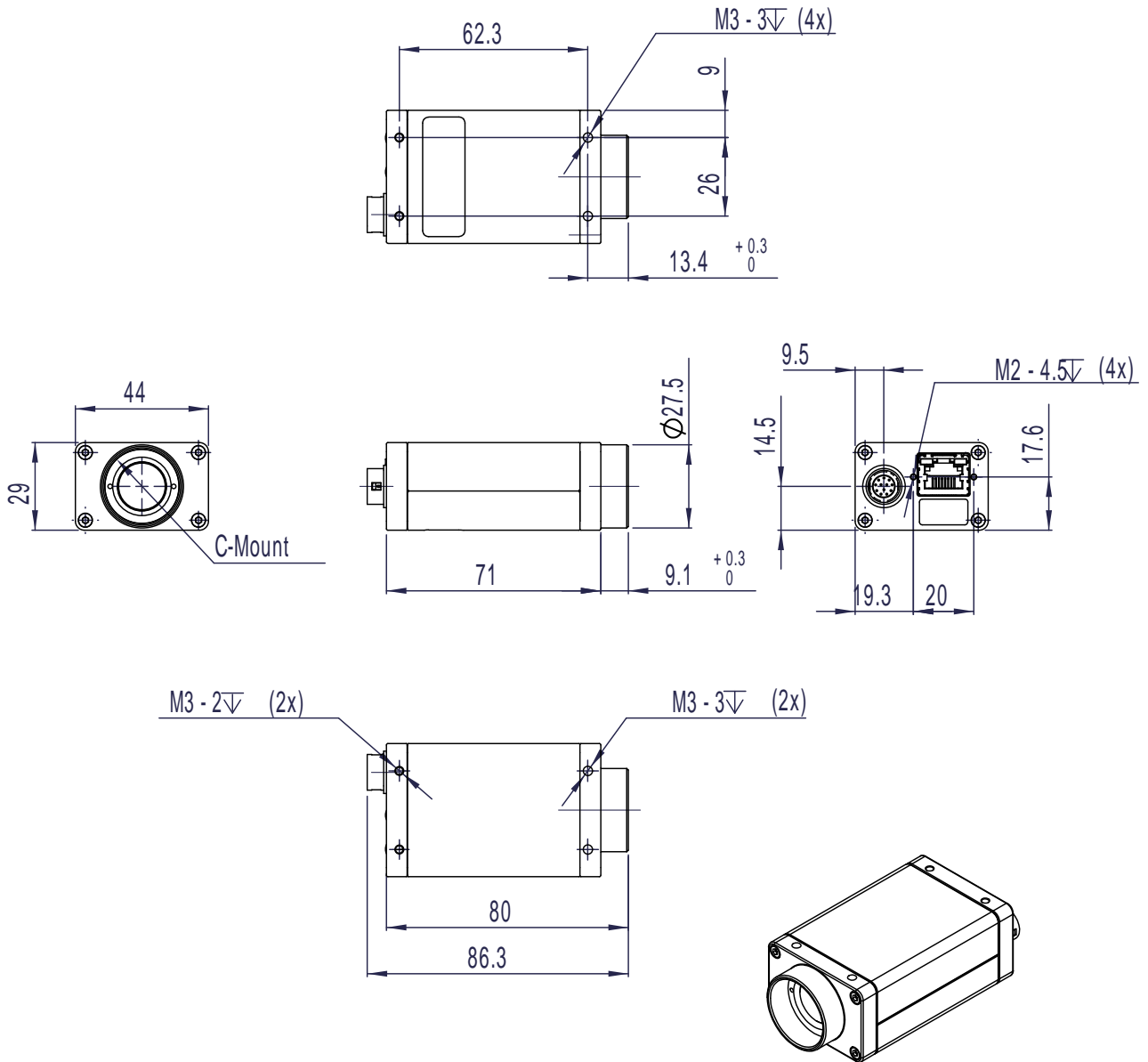
### Image optimization features:

- Auto gain (manual gain control: 0 to 40 dB; 0.1 dB increments)
- Auto exposure (exposure time control varies by pixel format)
- Auto white balance (color models only)
- Binning
- Black level (offset)
- Color correction, hue, saturation (color models only)
- Decimation
- Gamma correction
- Look-up tables (LUTs) (3)
- Region of interest (ROI), separate ROI for auto features
- Reverse X/Y

### Camera control features:

- Auto-iris (video type)
- Event channel
- Image chunk data
- IEEE 1588 Precision Time Protocol
- Storable user sets
- StreamBytesPerSecond (easy bandwidth control)
- Stream hold
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Temperature monitoring (main board)
- Trigger over Ethernet (ToE) Action Commands

## Technical drawing





## Applications

**Manta G-235B/G-235C is ideal for a wide range of applications including:**

- Machine Vision
- Broadcast analysis requiring Full HD such as sports analytics
- Industrial inspection
- Security and surveillance
- Intelligent traffic solutions (ITS), traffic (traffic monitoring / speed enforcement / toll collection)
- Low light / high sensitivity conditions
- Outdoor applications with dynamic lighting situations