**GigE VISION**

**Manta**
G-046

- PoE option
- Auto iris
- Angled head option
- Board level option

## Simplify your setup of multi-camera applications

## Modular machine vision camera with GigE Vision interface

Manta G-046 with Sony ICX415 runs 67.0 frames per second at 0.5 MP resolution.

Manta is Allied Vision's most versatile GigE Vision camera series. It provides the largest choice of image sensors and its advanced feature set simplifies the setup of multi-camera applications. With its modular hardware concept, Manta offers nearly endless configuration possibilities to adapt the camera to your application.

Easy software integration with Allied Vision's Vimba Suite and compatibility to the most popular third party image-processing libraries.

See the Modular Concept for lens mount, housing variants, optical filters, case design, and other modular options. See the Customization and OEM Solutions webpage for additional options.

# Allied Vision

## Specifications

| | |
|---|---|
| Interface | IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE) optional |
| Resolution | 780 (H) × 580 (V) |
| Sensor | Sony ICX415 |
| Sensor type | CCD Progressive |
| Shutter mode | GS (Global shutter) |
| Sensor size | Type 1/2 |
| Pixel size | 8.3 μm × 8.3 μm |
| Lens mounts (available) | C-Mount, CS-Mount |
| Max. frame rate at full resolution | 67 fps |
| ADC | 12 Bit |
| Image buffer (RAM) | 32 MByte |

### Imaging performance

Imaging performance data is based on the evaluation methods in the EMVA 1288 Release 3.1 standard for characterization of image sensors and cameras. Measurements are typical values for monochrome models measured at full resolution without optical filter. Contact Sales or AE for more information.

| | |
|---|---|
| Quantum efficiency at 529 nm | 37 % |
| Temporal dark noise | 21.1 e$^-$ |
| Saturation capacity | 15700 e$^-$ |
| Dynamic range | 57.2 dB |
| Absolute sensitivity threshold | 21.6 e$^-$ |

### Output

| | |
|---|---|
| Bit depth | 8/12 Bit |
| Monochrome pixel formats | Mono8, Mono12, Mono12Packed |
| YUV color pixel formats | YUV411Packed, YUV422Packed, YUV444Packed |
| RGB color pixel formats | RGB8Packed, BGR8Packed, RGBA8Packed, BGRA8Packed |
| Raw pixel formats | BayerRG8, BayerRG12Packed, BayerRG12 |

## General purpose inputs/outputs (GPIOs)

| | |
|---|---|
| Opto-isolated I/Os | 2 inputs, 2 outputs |
| RS232 | 1 |

## Operating conditions/dimensions

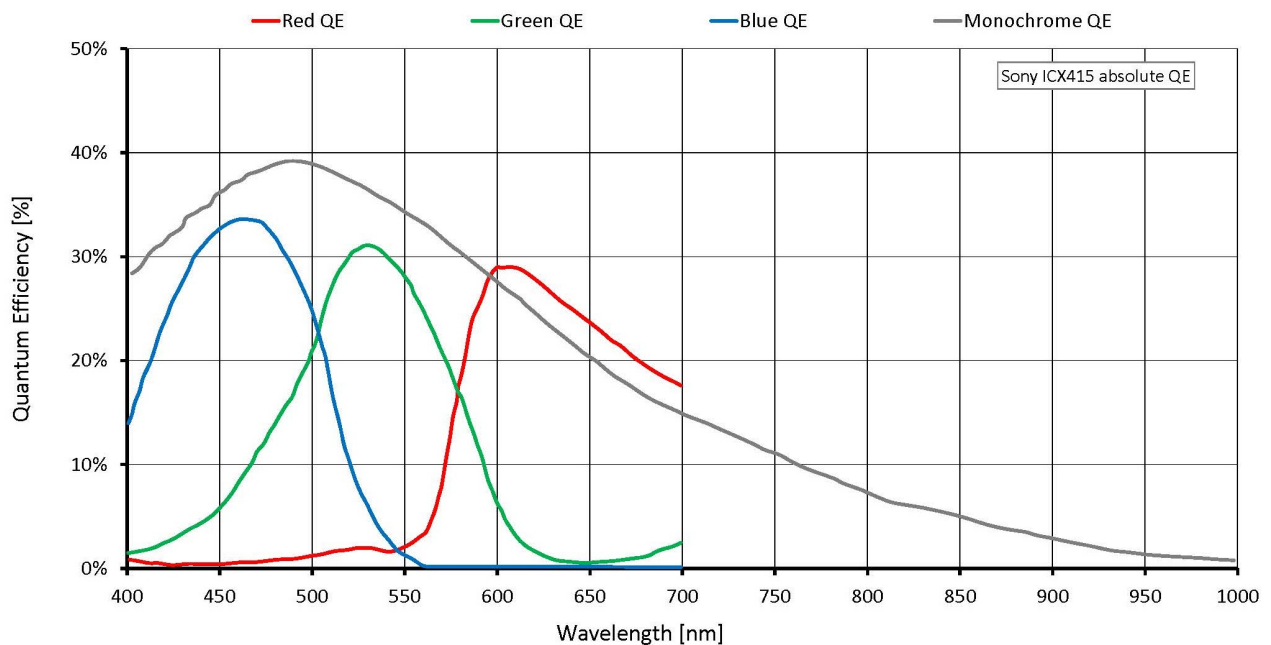| | |
|---|---|
| Operating temperature | +5 °C to +45 °C ambient (without condensation) |
| Power requirements (DC) | 8 to 30 VDC AUX or IEEE 802.3af PoE |
| Power consumption | External power: 3.6 W at 12 VDC \| Power over Ethernet: 4.2 W |
| Mass | 200 g; 210 g (PoE models) |
| Body dimensions (L × W × H in mm) | 86.4 × 44 × 29 (including connectors) |

## Quantum efficiency

# Allied Vision

## Features

### Image control: Auto

- Auto exposure
- Auto gain
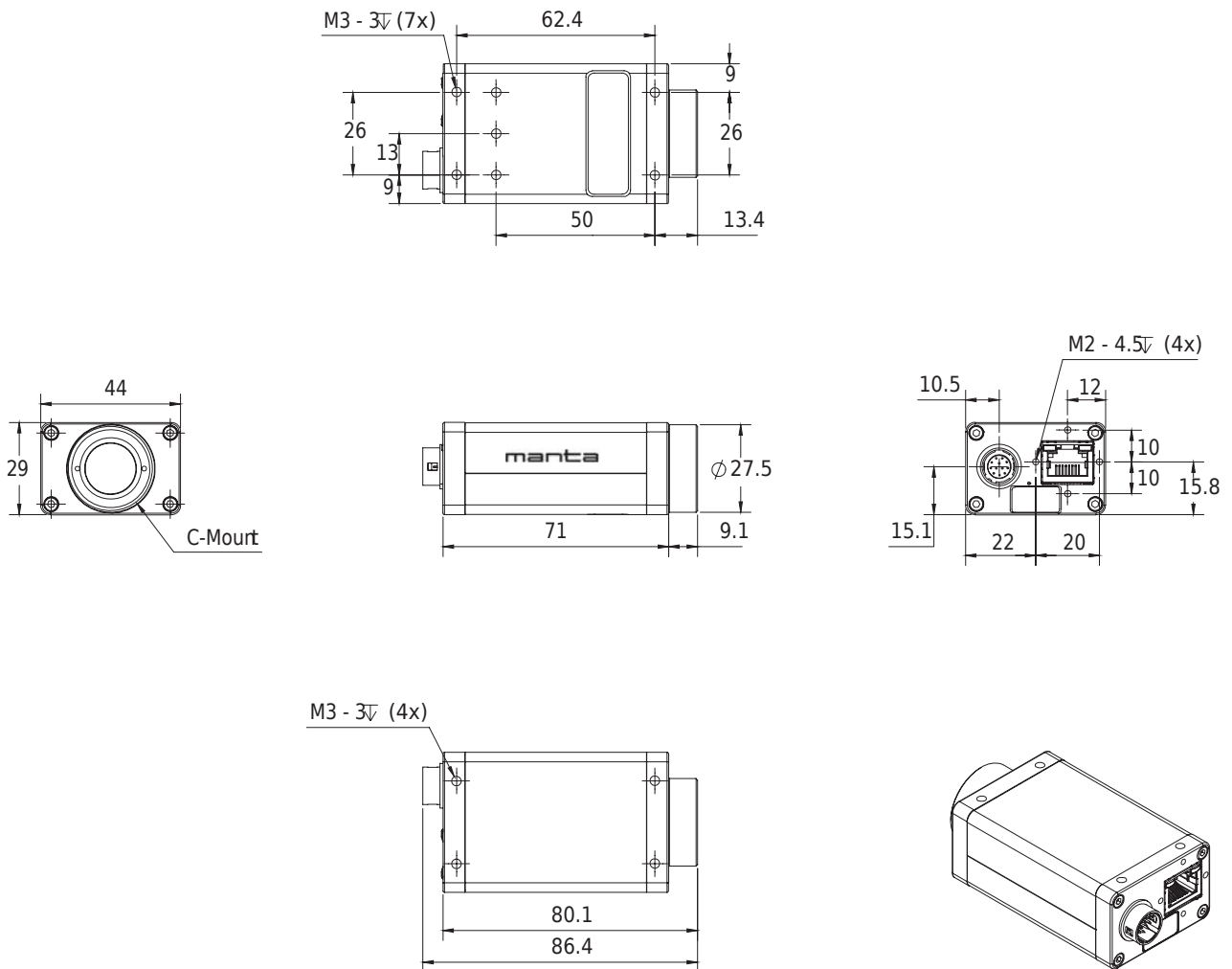- Auto white balance (color models)

### Image control: Other

- Binning
- Black level
- Color transformation (incl. hue, saturation; color models)
- Decimation
- Gamma
- LUT (look-up table)
- Reverse X
- ROI (region of interest)

### Camera control

- Acquisition frame rate
- Auo iris
- Bandwidth control
- Event channel
- Firmware update in the field
- I/O and trigger control
- Image chunk data
- Stream hold
- User sets

# Technical drawing



M3 - 3⍽ (7x)    62.4    9    26    13    9    26    50    13.4

44    29    C-Mount    71    ⌀ 27.5    9.1

M2 - 4.5⍽ (4x)    10.5    12    10    10    15.8    15.1    22    20

M3 - 3⍽ (4x)    80.1    86.4

# Applications

Manta G-046 is ideal for a wide range of applications including:

- Applications which require high sensitivity (low light)
- Semiconductor inspection
- Pharmaceutical inspection
- Logistics
- Intelligent traffic solutions (ITS)