

# MV-CA004-10UM/UC

0.4 MP 1/2.9" CMOS USB3.0 Area Scan Camera



**GEN*i*CAM**

**US3<sup>TM</sup>**  
VISION

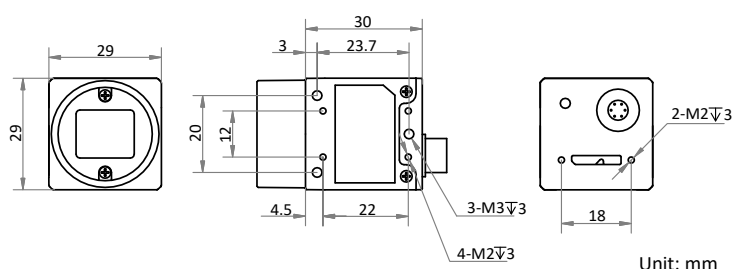
## Introduction

MV-CA004-10UM/UC camera adopts Sony® IMX 287 sensor to provide high-quality image. It uses USB3.0 interface to transmit non-compressed images in real time, and its max. frame rate can reach 526.5 fps in full resolution.

## Key Feature

- Supports auto and manual adjustment for gain, exposure control, LUT, Gamma correction, etc.
- Supports hardware triggering, software triggering and free run mode.
- Adopts M2 screw holes for securing cable that connects USB3.0 interface.
- Compatible with USB3 Vision Protocol, GenICam Standard, and the third-party software based on these protocol and standard.

## Dimension



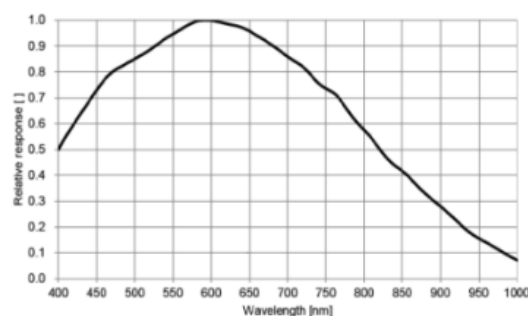
## Available Model

- Mono camera: MV-CA004-10UM
- Color camera: MV-CA004-10UC

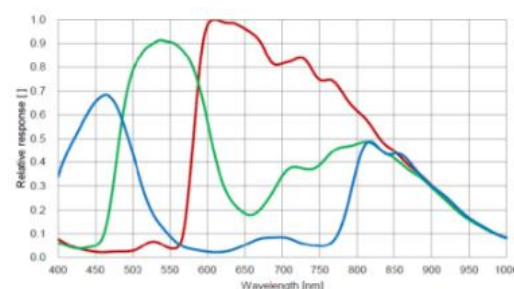
## Applicable Industry

Electronic semiconductor, factory automation, liquor and beverage, medicine packing, etc.

## Sensor Quantum Efficiency



MV-CA004-10UM



MV-CA004-10UC

## Specification

| Model              | MV-CA004-10UM                                                                                                                                                                 | MV-CA004-10UC                                                                          |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Camera             |                                                                                                                                                                               |                                                                                        |
| Sensor type        | CMOS, global shutter                                                                                                                                                          |                                                                                        |
| Sensor model       | Sony® IMX287                                                                                                                                                                  |                                                                                        |
| Pixel size         | 6.9 μm × 6.9 μm                                                                                                                                                               |                                                                                        |
| Sensor size        | 1/2.9"                                                                                                                                                                        |                                                                                        |
| Resolution         | 720 × 540                                                                                                                                                                     |                                                                                        |
| Max. frame rate    | 526.5 fps @ 720 × 540                                                                                                                                                         |                                                                                        |
| Dynamic range      | 74 dB                                                                                                                                                                         |                                                                                        |
| SNR                | 41 dB                                                                                                                                                                         |                                                                                        |
| Gain               | 0 dB to 20 dB                                                                                                                                                                 |                                                                                        |
| Exposure time      | UltraShort exposure mode: 1 μs to 14 μs                                                                                                                                       |                                                                                        |
|                    | Standard exposure mode: 15 μs to 10 sec                                                                                                                                       |                                                                                        |
| Exposure mode      | Off/ Once /Continuous exposure mode                                                                                                                                           |                                                                                        |
| Mono/color         | Mono                                                                                                                                                                          | Color                                                                                  |
| Pixel format       | Mono 8/10/10p/12/12p                                                                                                                                                          | Mono 8/10/12, Bayer RG 8/10/10p/12/12p, YUV422Packed, YUV422_YUYV_Packed, RGB 8, BGR 8 |
| Binning            | Supports 1 × 1, 2 × 2, 4 × 4                                                                                                                                                  |                                                                                        |
| Decimation         | Supports 1 × 1, 2 × 2, 4 × 4                                                                                                                                                  |                                                                                        |
| Reverse image      | Supports horizontal and vertical reverse image output                                                                                                                         |                                                                                        |
| Image buffer       | 128 MB                                                                                                                                                                        |                                                                                        |
| Electrical feature |                                                                                                                                                                               |                                                                                        |
| Data interface     | USB3.0, compatible with USB2.0                                                                                                                                                |                                                                                        |
| Digital I/O        | 6-pin Hirose connector provides power and I/O, including opto-isolated input × 1 (Line 0), opto-isolated output × 1(Line 1), and bi-directional non-isolated I/O × 1 (Line 2) |                                                                                        |
| Power supply       | 9 VDC to 24 VDC, supports USB3.0 power supply                                                                                                                                 |                                                                                        |
| Power consumption  | Typ. 3 W @ 5 VDC (USB3.0 provides power supply)                                                                                                                               |                                                                                        |
| Mechanical         |                                                                                                                                                                               |                                                                                        |
| Lens mount         | C-mount                                                                                                                                                                       |                                                                                        |
| Dimension          | 29 mm × 29 mm × 30 mm (1.1" × 1.1" × 1.2")                                                                                                                                    |                                                                                        |
| Weight             | Approx. 80 g (0.2 lb.)                                                                                                                                                        |                                                                                        |
| Ingress protection | IP30 (under proper lens installation and wiring)                                                                                                                              |                                                                                        |
| Temperature        | Working temperature: 0 °C to 50 °C (32 °F to 122 °F)<br>Storage temperature: −30 °C to 70 °C (−22 °F to 158 °F)                                                               |                                                                                        |
| Humidity           | 20% RH to 80% RH (no condensation)                                                                                                                                            |                                                                                        |
| General            |                                                                                                                                                                               |                                                                                        |
| Client software    | MVS or third-party software meeting with USB3 Vision Protocol                                                                                                                 |                                                                                        |
| Operating system   | 32/64-bit Windows 7/10, 32/64-bit Linux                                                                                                                                       |                                                                                        |
| Compatibility      | USB3 Vision, GenICam                                                                                                                                                          |                                                                                        |
| Certification      | CE, RoHS, KC                                                                                                                                                                  |                                                                                        |