

# MV0-D2048-C01-3D06-768-G2

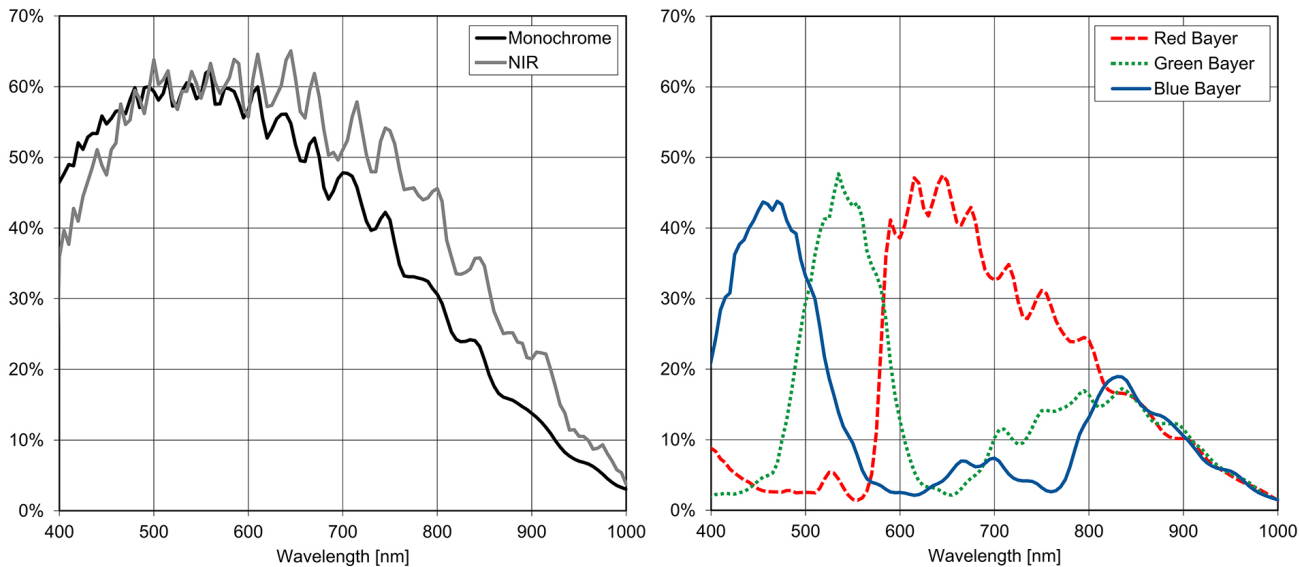
The camera series MV0-D2048(I/C)-C01-G2 is based on the CMOSIS CMV4000 V3 CMOS image sensor

## Features

- CMOSIS CMV4000 V3 image sensor
- 2048 x 2048 pixel resolution
- Good NIR spectral response
- Suitable for standard and low light applications
- Up to 14842fps @ full resolution
- Global shutter
- Available in monochrome, NIR and color
- Extended sensor and camera features
- Up to 10bit greyscale resolution
- Boardlevel and OEM solution available
- GigEVision interface (PoE)



## Quantum Efficiency Image Sensor



## Image Sensor Specifications

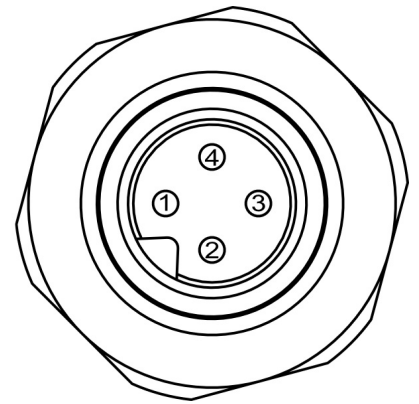
|                          |   |
|--------------------------|---|
| Manufacturer / Type      | CMOSIS, CMV4000   |
| Technology               | CMOS  |
| Optical format           | 1"  |
| Optical diagonal         | 15.93mm   |
| Resolution               | 2048 x 2048   |
| Pixel size               | 5.5µm x 5.5µm   |
| Active optical area      | 11.26mm x 11.26mm   |
| Dark current             | 125e-/s   |
| Read out noise           | 13e-  |
| Full well capacity / SNR | 11ke- / 105:1   |
| Spectral range           | Monochrome: < 330 to 930nm (to 10% of peak responsivity)<br>NIR: < 330 to 970nm (to 10% of peak responsivity)<br>Color: < 380 to 670nm (to 10% of peak responsivity)  |
| Responsivity             | Monochrome: 943 x 10 <sup>3</sup> DN / (J/m <sup>2</sup> ) @ 540nm / 8bit<br>NIR: 854 x 10 <sup>3</sup> DN / (J/m <sup>2</sup> ) @ 850nm / 8bit<br>Color: 734 x 10 <sup>3</sup> DN / (J/m <sup>2</sup> ) @ 540nm / 8bit |
| Quantum Efficiency       | Monochrome: > 57%<br>NIR: > 60%<br>Color: > 45%   |
| Optical fill factor      | TBD   |
| Dynamic range            | 60dB  |
| Characteristic curve     | Linear, Piecewise linear  |
| Shutter mode             | Global shutter  |

## Camera Specifications

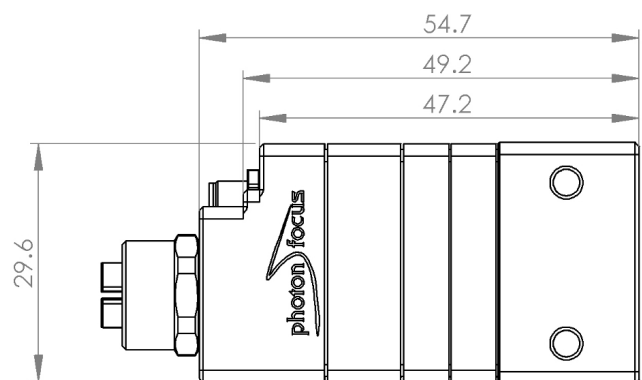
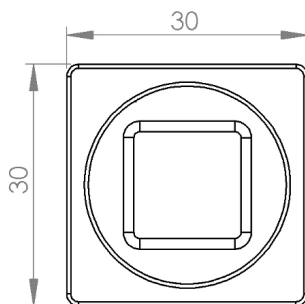
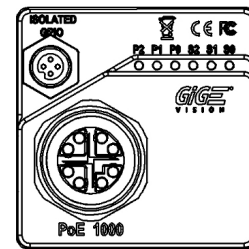
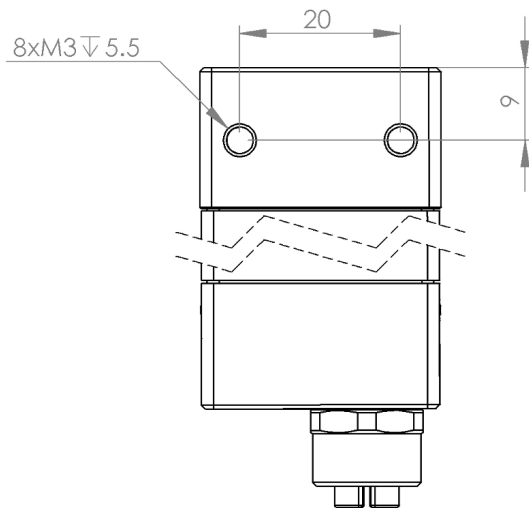
|                                  |   |
|----------------------------------|---|
| Interface                        |   |
| Frame rate                       | 14842fps  |
| Pixel clock                      | 80MHz   |
| Camera taps                      | 2   |
| Greyscale resolution             | 8Bit / 10Bit  |
| Fixed pattern noise (FPN)        | < 1DN RMS @ 8Bit  |
| Exposure time range              | 10µs - 419ms  |
| Analog gain                      | yes   |
| Digital gain                     | 0.1 to 15.99 (FineGain)   |
| Trigger Modes                    | Free running (non triggered), external Trigger, SWTrigger   |
| Features                         | Configurable region of interest (ROI), Up to 8 regions of interest (MROI), Decimation in y-direction, 2 look-up tables (12-to-8Bit) on user-defined image region (Region-LUT), Constant frame rate independent of exposure time, Crosshairs overlay on the image, Temperature monitoring of camera, Camera informations readable over SDK, Ultra low trigger delay and low trigger jitter, Extended trigger input and strobe output functionality, Status line in picture, with Shaft Encoder |
| Operation temperature / moisture | 0°C ... + 50°C / 20% ... 80%  |
| Storage temperature / moisture   | -25°C ... 60°C / 20% ... 95%  |
| Power supply                     | PoE (compliant according to IEEE 802.3af standard Class: 2)   |
| Power consumption                | < 4.2W  |
| Lens mount                       | C-Mount   |
| I/O Inputs                       | 1x Opto-isolated  |
| I/O Outputs                      | 1x Opto-isolated  |
| Dimensions                       | 30 x 30 x 53mm <sup>3</sup>   |
| Mass                             | 75g   |
| Connector I/O (Power)            | Binder 4-pole (mating plug M5 x 0.5, Series 707)  |
| Connector Interface              | X-coded M12   |
| Conformity                       | CE / RoHS / WEEE  |
| IP Code                          | IP40  |

## Connectors

| Pin | I/O Type | Name     | Description                   |
|-----|----------|----------|-------------------------------|
| 1   | I        | ISO_IN   | Trigger input (opto-isolated) |
| 2   | PWR      | ISO_GND  | I/O GND 0V                    |
| 3   | O        | ISO_OUT  | Strobe output (opto-isolated) |
| 4   | n.a.     | Reserved | Do not connect                |



## Dimensions



## Explanation

DN DigitalNumber (equals to LSB)

e<sup>-</sup> Electrons

## Order Information

MV0-D2048-C01-3D06-768-G2-8      BW model

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## Compatibility



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