MV2-D2048x1088-C01-HS02-G1

The camera series MV2-D2048x1088-C01-HS02-G1 is based on the IMEC CMV2K-SM5x5-NIR CMOS image sensor.

Features

- IMEC CMV2K-SM5x5-NIR CMOS image sensor
- 2048 x 1088 pixel resolution
- Good NIR spectral response
- Suitable for hyperspectral applications
- Up to 50fps @ full resolution
- Global shutter
- 25 pass bands from 665nm to 975nm
- Extended sensor and camera features
- Up to 10bit greyscale resolution
- OEM solution available
- GigEVision interface

Quantum Efficiency Image Sensor

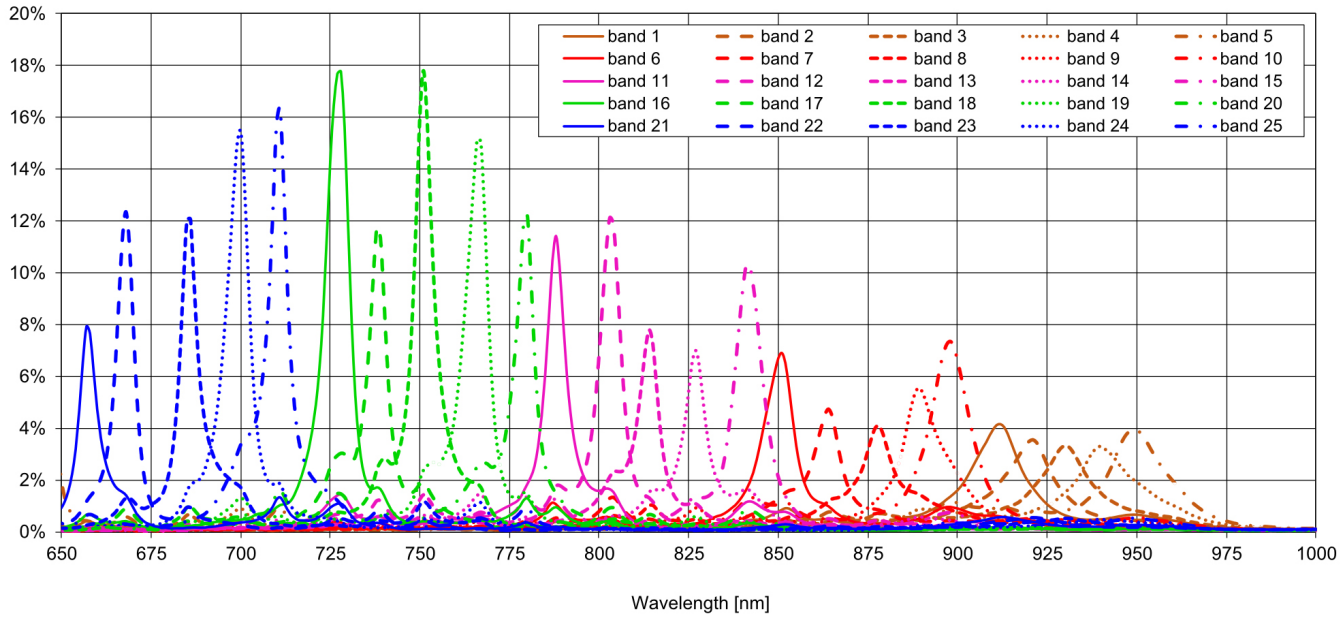


Image Sensor Specifications

Manufacturer / Type	IMEC, CMV2K-SM5x5
Technology	CMOS
Optical format	2/3"
Optical diagonal	12.76mm
Resolution	2048 x 1088
Pixel size	5.5µm x 5.5µm
Active optical area	11.26mm x 5.98mm
Dark current	125e-/s
Read out noise	13e-
Full well capacity / SNR	11ke- / 105:1
Spectral range	Hyperspectral: 665 to 975nm (25 pass bands)
Responsivity	Hyperspectral: 454 x 10^3 DN / (J/m²) @ 715nm / 8bit
Quantum Efficiency	Hyperspectral: < 18%
Optical fill factor	42% without micro lenses
Dynamic range	60dB
Characteristic curve	Linear, Piecewise linear
Shutter mode	Global shutter

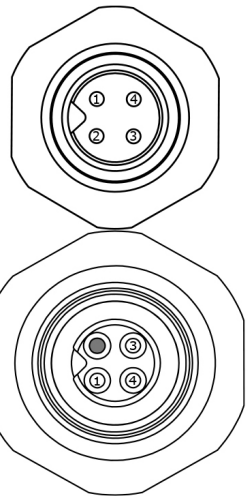
Camera Specifications

Interface	GigE
Frame rate	50fps
Pixel clock	N/A
Camera taps	N/A
Greyscale resolution	8Bit / 10Bit
Fixed pattern noise (FPN)	< 1DN RMS @ 8Bit
Exposure time range	7µs - 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
Operation temperature / moisture	0°C ... + 50°C / 20% ... 80%
Storage temperature / moisture	-25°C ... 60°C / 20% ... 95%
Power supply	+12VDC (-10%) ... +24VDC (+10%)
Power consumption	< 4.2W
Lens mount	C-Mount
I/O Inputs	2x Opto-isolated
I/O Outputs	1x Opto-isolated
Dimensions	40 x 40 x 62.2mm³
Mass	160g
Connector I/O (Power)	Binder 4-pin (I/O); Binder 3-pin (Power); mating plug M5 x 0.5, Series 707
Connector Interface	RJ-45
Conformity	CE / RoHS / WEEE
IP Code	IP40

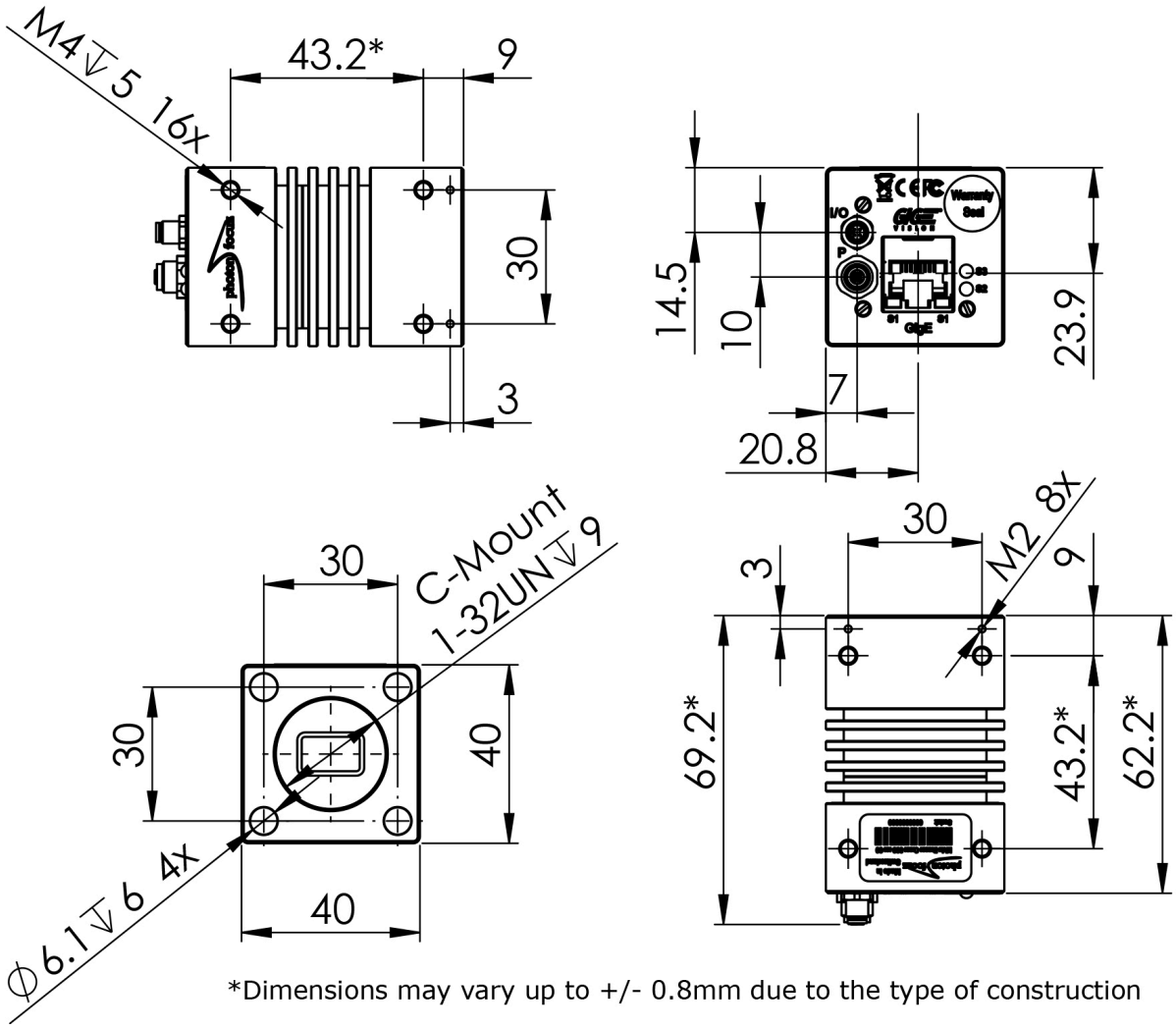
Connectors

Pin	I/O Type	Name	Description I/O Connector
1	I	ISO_IN0	Trigger input 0 (opto-isolated)
2	PWR	ISO_GND	I/O GND 0V
3	O	ISO_OUT	Strobe output (opto-isolated)
4	I	ISO_IN1	Trigger input 1 (opto-isolated)

Pin	I/O Type	Name	Description Power Connector
1	PWR	CAMERA_PWR	Camera Power
n.a.	n.a.	not connected	Not connected pin
3	PWR	CAMERA_GND	Camera GND
4	n.a.	Reserved	Do not connect



Dimensions



*Dimensions may vary up to +/- 0.8mm due to the type of construction

Explanation

DN DigitalNumber (equals to LSB)

e^- Electrons

Order Information

MV2-D2048x1088-C01-HS02-G1	Hyperspectral model

Compatibility

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