

# MV-CB050-60UM/UC

5 MP CMOS USB3.0 Board Level Camera



GEN*i*CAM

USB<sup>TM</sup>  
VISION

## Introduction

MV-CB050-60UM/UC camera adopts stacked BSI CMOS 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 80 fps in full resolution. With compact design and USB3.0 transmission via high-speed FPC connector, the camera can meet different spatial requirements.

## Key Feature

- USB3.0 supports FPC connection to meet limited spatial requirements.
- Supports auto or manual adjustment of gain, exposure time, white balance, LUT correction, Gamma correction, etc.
- Adopts image interpolation algorithm for color camera to have better color correction.
- Compatible with USB3 Vision Protocol, GeniCam standard, and the third-party software based on these protocol and standard.

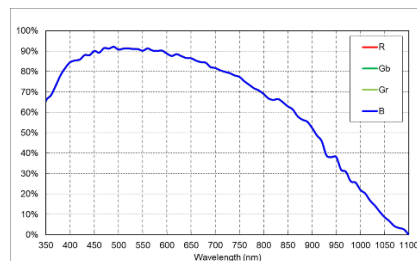
## Applicable Industry

3D application, semiconductor, etc.

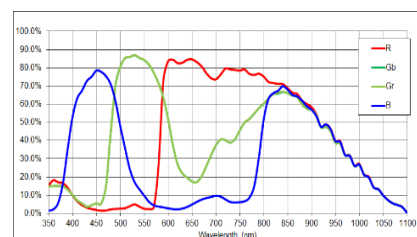
## Available Model

- Mono camera: MV-CB050-60UM-C-F
- Color camera: MV-CB050-60UC-C-F

## Sensor Quantum Efficiency

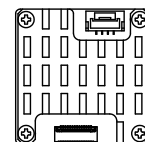
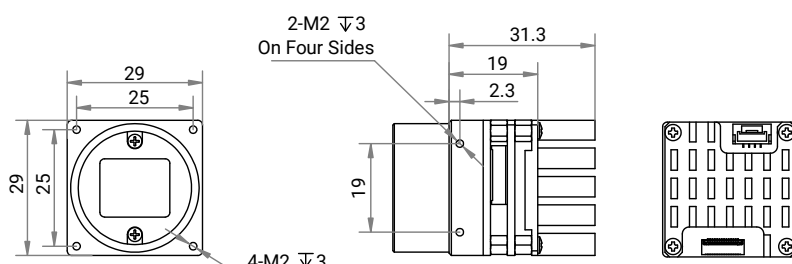


MV-CB050-60UM



MV-CB050-60UC

## Dimension



Unit: mm

Model	MV-CB050-60UM	MV-CB050-60UC
<b>Performance</b>		
Sensor type	CMOS, global shutter	
Sensor model	Stacked BSI	
Pixel size	3.45 $\mu\text{m}$ $\times$ 3.45 $\mu\text{m}$	
Sensor size	2/3"	
Resolution	2448 $\times$ 2048	
Max. frame rate	80 fps @ 2448 $\times$ 2048 Mono 8	80 fps @ 2448 $\times$ 2048 Bayer GR 8
Dynamic range	73.9 dB	
SNR	42.4 dB	
Gain	High full well capacity: 0 dB to 12.8 dB High sensitivity: 0 dB to 24 dB	
Exposure time	High full well capacity: 30 $\mu\text{s}$ to 10 sec High sensitivity: 5 $\mu\text{s}$ to 10 sec	
Exposure mode	Off/Once/Continuous exposure mode, supports Trigger Width	
Mono/color	Mono	Color
Pixel format	Mono 8/10/10Packed/12/12Packed	Mono8 Bayer GR 8/10/10Packed/12/12Packed YUV422Packed, YUV422_YUYV_Packed RGB8, BGR8
Binning	Supports 1 $\times$ 1, 2 $\times$ 2, 4 $\times$ 4	
Decimation	Supports 1 $\times$ 1, 2 $\times$ 2, 4 $\times$ 4	
Reverse image	Supports horizontal and vertical reverse image output	
<b>Electrical feature</b>		
Data interface	USB 3.0, compatible with USB 2.0	
Digital I/O	Bi-directional non-isolated I/O $\times$ 2 (Line 2, Line 5)	
Power supply	5 V, USB 3.0 power supply	
Power consumption	Typ. 1.5 W @ 5 VDC (USB power supply)	
<b>Mechanical</b>		
Lens mount	C-mount	
Dimension	29 mm $\times$ 29 mm $\times$ 31.3 mm (1.1" $\times$ 1.1" $\times$ 1.2")	
Weight	Approx. 37 g (0.08 lb.)	
Temperature	Working temperature: 0 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$ (32 $^{\circ}\text{F}$ to 122 $^{\circ}\text{F}$ ) Storage temperature: -30 $^{\circ}\text{C}$ to 80 $^{\circ}\text{C}$ (-22 $^{\circ}\text{F}$ to 176 $^{\circ}\text{F}$ )	
Humidity	20% RH to 80% RH (no condensation)	
<b>General</b>		
Client software	MVS or third-party software with USB3 Vision Protocol	
Operating system	32/64-bit Windows 7/10, 64-bit Windows 11, 32/64-bit Linux	
Compatibility	USB3 Vision, GenICam	
Certification	CE, RoHS	