

# MER2-1220-32U3M/C(-L)

MERCURY2 Series 12.2MP CMOS USB3.0 Area Scan Camera



**USB<sup>TM</sup>**  
VISION

**GEN<i>i>CAM**

**CE**

**FC**



The MER2-1220-32U3M/C(-L) camera is a monochrome/color USB3.0 Vision camera with the Sony IMX226 CMOS sensor. Thanks to the extremely compact (29mm × 29mm), robust metal housings and locking screw connectors, the MERCURY2 cameras can secure the reliability of cameras deployed in harsh environments. The MER2-1220-32U3M/C(-L) camera is powered over the USB3.0 interface. Compared to the MER2-1220-32U3M/C, the MER2-1220-32U3M/C-L has no I/O interfaces, so it is more light and handy. The camera has an outstanding price/performance ratio.

## Applications

Suitable for machine vision applications such as industrial inspection, medical, scientific research, education, security and so on.

## Features

- Trigger mode: Frame Start /Frame Burst Start
- Support Decimation, Binning, Digital Shift and Black Level
- Adjustable Gamma for optimizing the brightness of images
- Color models support Light source preset, Color Transformation Control and Saturation
- Monochrome models support Noise Reduction and Sharpness
- Support Global Reset Release shutter mode
- Programmable LUTs and storable user sets
- Support Timer and Counter
- Support Remove Parameter Limit to expand the range of exposure, gain, white balance, and so on
- 16KB data storage area for saving algorithm coefficients and parameter configuration

## Specifications

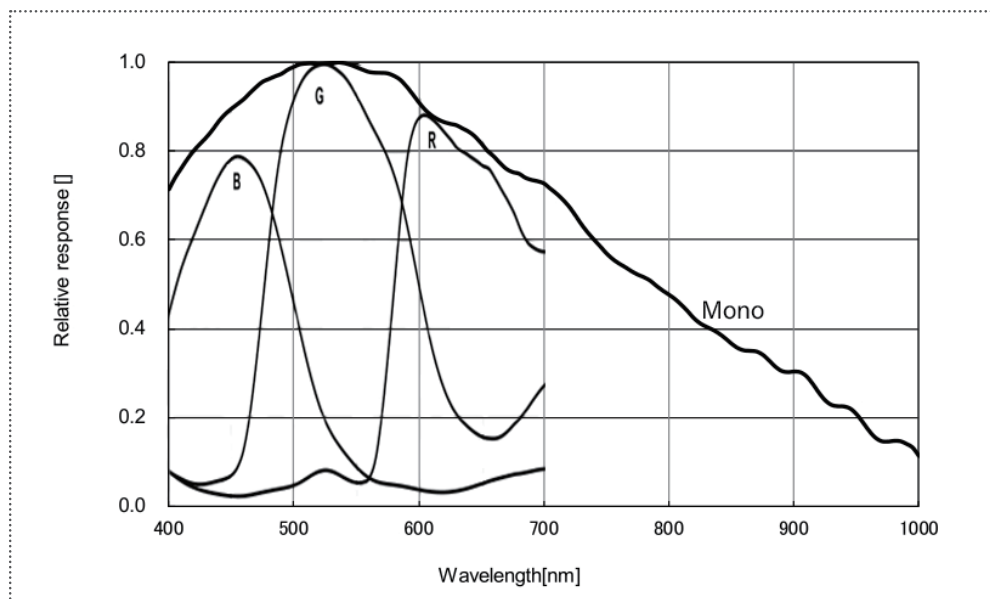
Model	MER2-1220-32U3C	MER2-1220-32U3C-L	MER2-1220-32U3M	MER2-1220-32U3M-L
Resolution	4024(H) × 3036(V)			
Sensor	Sony IMX226, Rolling shutter CMOS			
Sensor Format	1/1.7"			
Pixel Size	1.85μm × 1.85μm			
Frame Rate	32.3fps			
ADC	12bit			
Pixel Bit Depth	8bit, 12bit			
Mono/Color	Color		Mono	
Pixel Formats	Bayer RG8 / Bayer RG12		Mono8 / Mono12	
SNR	40.61dB		40.77dB	
Exposure Time	Standard: 10μs ~ 1s, Actual Steps: 1 row period			
Gain	0dB ~ 24dB; Default: 0dB, Steps: 0.1dB			
Binning	1×1, 1×2, 1×4, 2×1, 2×2, 2×4, 4×1, 4×2, 4×4			
Decimation	FPGA: 1×1, 1×2, 1×4, 2×1, 2×2, 2×4, 4×1, 4×2, 4×4			
Synchronization	Hardware trigger (MER2-U3-L: N/A), software trigger			
Acquisition Mode	Single frame, Continuous, Software trigger, Hardware trigger (MER2-U3-L: N/A)			
Reverse X/Y	Reverse X/Y			
I/O Interface	1 input and 1 output with opto-isolated, 2 programmable GPIOs (MER2-U3-L: N/A)			
Data Interface	USB3.0			
Power Supply	Power through USB3.0 interface			
Power Consumption	< 2.7W @ 5VDC			
Operating Temp.	0°C ~ +45°C			
Storage Temp.	-20°C ~ +70°C			
Operating Humidity	10% ~ 80%			
Lens Mount	C / CS			
Dimensions	29(W) × 29(H) × 29(L) mm (without lens adapter or connectors)			
Weight	MER2-U3: 65g; MER2-U3-L: 61g			
Software	3rd-party software such as HALCON, MERLIC and LabVIEW			
OS	32bit / 64bit Windows, Linux, Android, ARMv7, ARMv8			
Conformity	CE, RoHS, FCC, USB3.0 Vision, GenICam			

I/O Interface



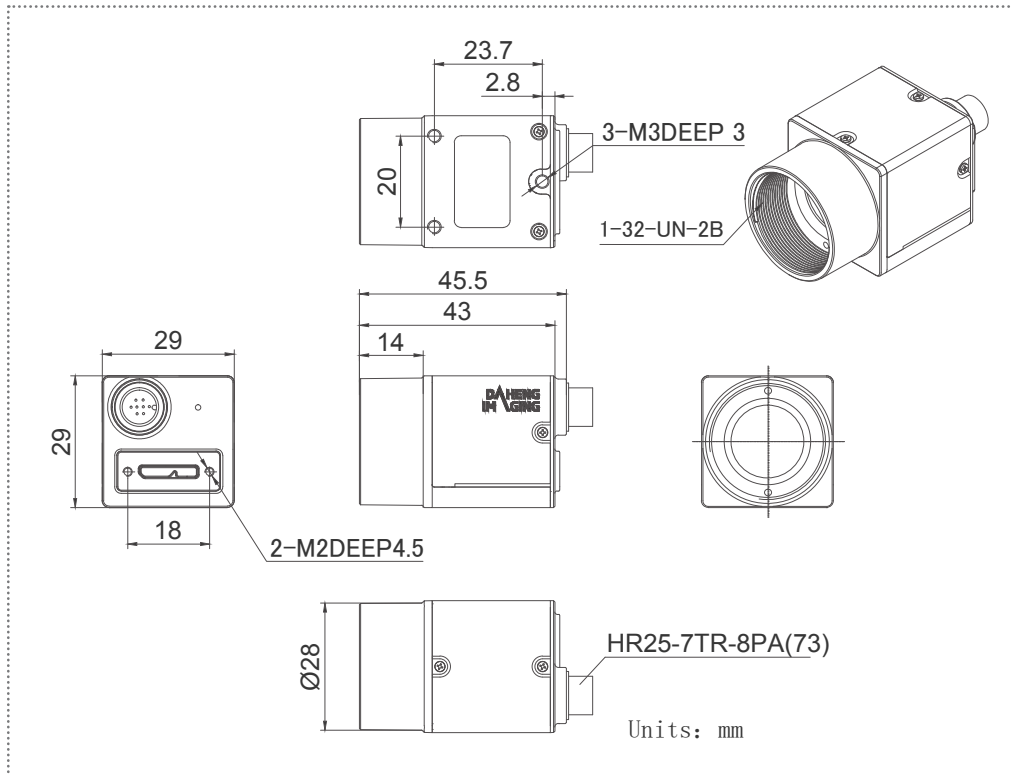
Pin	Definition	Core Color	Description
1	Line 0+	Green	Opto-isolated input +
2	GND	Blue	GPIO GND
3	Line 0-	Grey	Opto-isolated input -
4	NC	Purple	NC
5	Line 2	Orange	GPIO input/output
6	Line 3	Pink	GPIO input/output
7	Line 1-	White Green	Opto-isolated output -
8	Line 1+	White Blue	Opto-isolated output +

Spectral Response

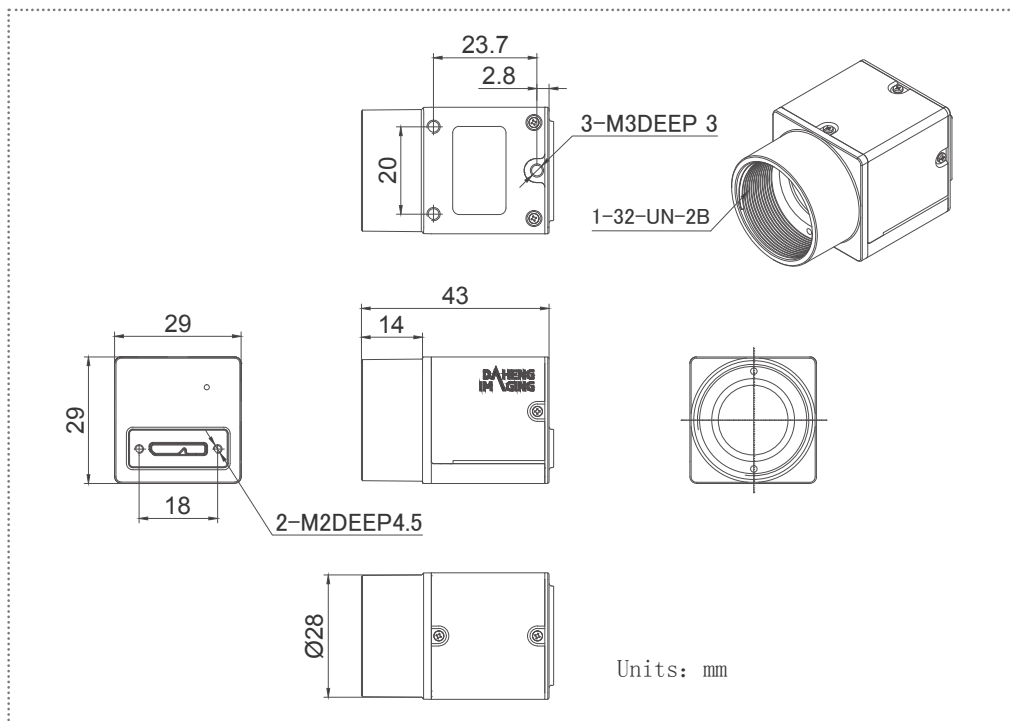


MER2-1220-32U3M/C  
 MER2-1220-32U3M/C-L

Technical Drawing



MER2-1220-32U3M/C



MER2-1220-32U3M/C-L

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