

MER2-1220-32U3M/C-W90(-S90)

MERCURY2 Series 12.2MP CMOS USB3.0 Area Scan Camera



The MER2-1220-32U3M/C-W90(-S90) camera with 90 degree angle lens mount, compared to MER2-U3 with standard lens mount, MER2-U3 camera with 90 degree lens angle mount has more installation flexibility. The MER2-1220-32U3M/C-W90(-S90) camera is a monochrome/color USB3.0 Vision camera with the Sony IMX226 CMOS sensor. The sensor surface is at a 90 degree angle to the Data interface surface. The MER2-1220-32U3M/C-W90(-S90) has opto-isolated I/Os, and the GPIOs give MER2-U3 cameras maximum flexibility to adapt to specific needs. Compared to the MER2-1220-32U3M/C-W90, the image field of view of the MER2-1220-32U3M/C-W90-S90 is rotated 90 degrees.

Applications

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

Features

- Trigger mode: Frame Start /Frame Burst Start
- 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
- Sequencer Control
- Support Global Reset Release shutter mode
- 90 degree angle lens mount enables the camera to be angle installed in harsh environment
- Programmable LUTs and User Set Control
- Support Timer and Counter
- Support Remove Parameter Limit to expand the range of exposure, gain and so on
- 16KB data storage area for saving algorithm coefficients and parameter configuration

Specifications

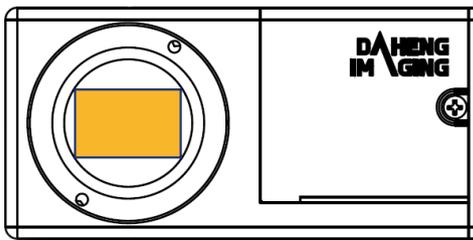
| Model | MER2-1220-32U3C-W90 | MER2-1220-32U3C-W90-S90 | MER2-1220-32U3M-W90 | MER2-1220-32U3M-W90-S90 |
|--------------------|--|-------------------------|---------------------|-------------------------|
| Resolution | 4024(H) × 3036(V) | | | |
| Sensor | Sony IMX226 Rolling shutter CMOS | | | |
| Sensor Format | 1/1.7" | | | |
| Pixel Size | 1.85μm × 1.85μm | | | |
| Frame Rate | 32.3 fps | | | |
| ADC | 12 bit | | | |
| Pixel Bit Depth | 8 bit, 12 bit | | | |
| Mono/Color | Color | | Mono | |
| Pixel Formats | Bayer RG8 / Bayer RG12 / Mono8 / Mono12 | | Mono8 / Mono12 | |
| SNR | 40.61 dB | | 40.77 dB | |
| 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, software trigger | | | |
| Acquisition Mode | Single frame, Continuous, Software trigger, Hardware trigger | | | |
| Reverse X/Y | Reverse X/Y | | | |
| I/O Interface | 1 input and 1 output with opto-isolated, 2 programmable GPIOs | | | |
| Data Interface | USB3.0 | | | |
| Power Supply | Power through USB3.0 interface | | | |
| Typical Power | 1.79 W @ 5 VDC | | | |
| 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) × 58.8(L) mm (with lens adapter, without I/O connectors) | | | |
| Weight | 78 g | | | |
| Software | 3rd-party software such as HALCON, MERLIC and LabVIEW | | | |
| OS | 32bit / 64bit Windows, Linux, Android, ARMv7, ARMv8 | | | |
| Conformity | CE, RoHS, FCC, ICES, UKCA, USB3.0 Vision®, GenICam® | | | |

I/O Interface

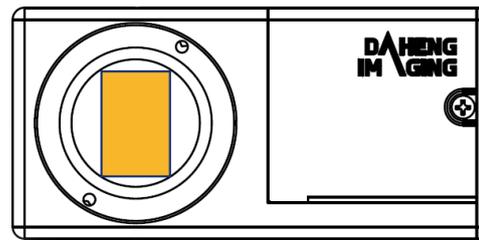


| Pin | Definition | Description |
|-----|------------|------------------------|
| 1 | Line0+ | Opto-isolated input + |
| 2 | GND | GPIO GND |
| 3 | Line0- | Opto-isolated input - |
| 4 | NC | NC |
| 5 | Line2 | GPIO input/output |
| 6 | Line3 | GPIO input/output |
| 7 | Line1- | Opto-isolated output - |
| 8 | Line1+ | Opto-isolated output + |

Sensor Angle Direction

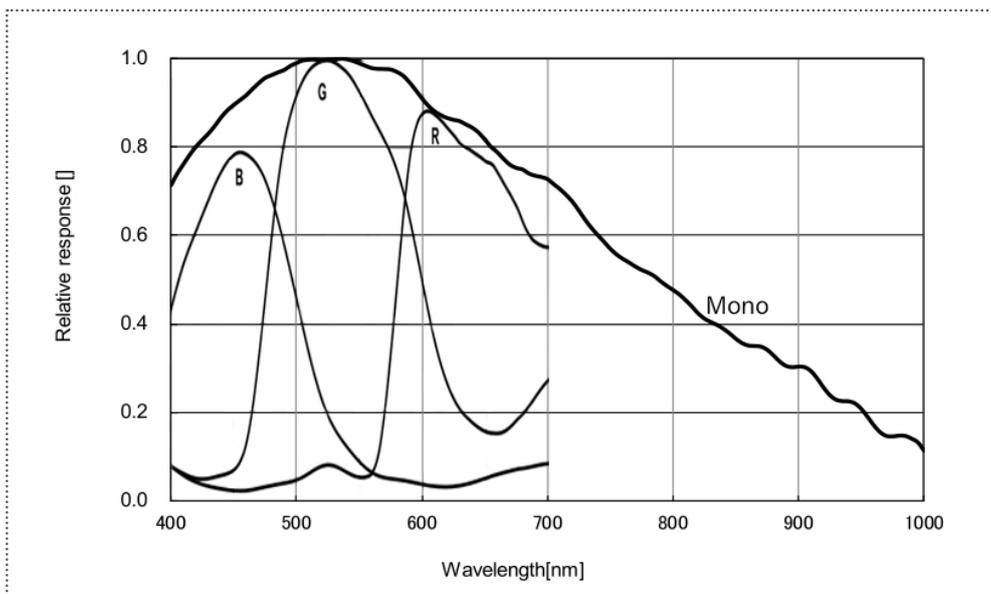


MER2-W90

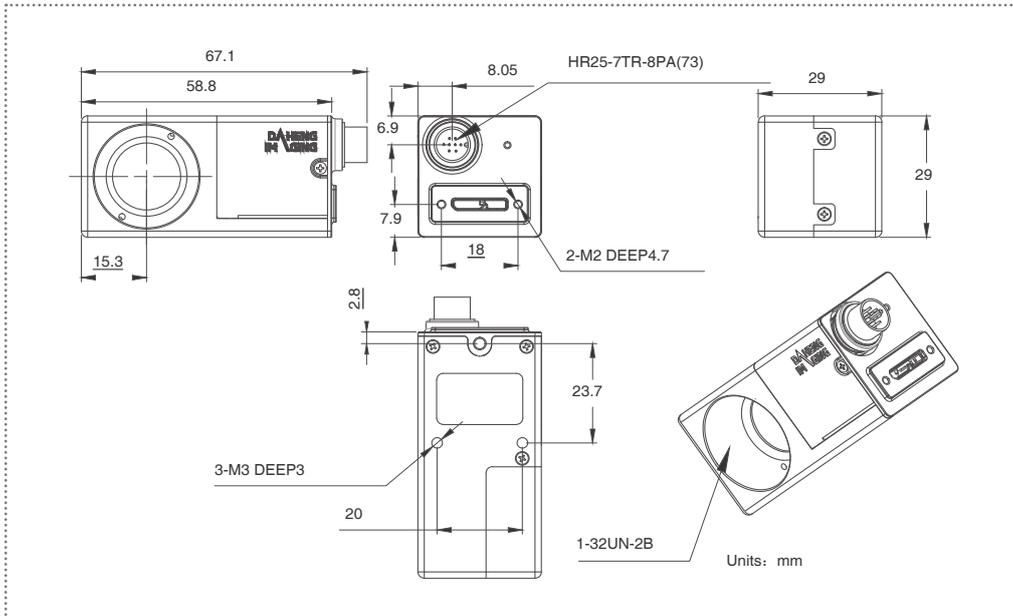


MER2-W90-S90

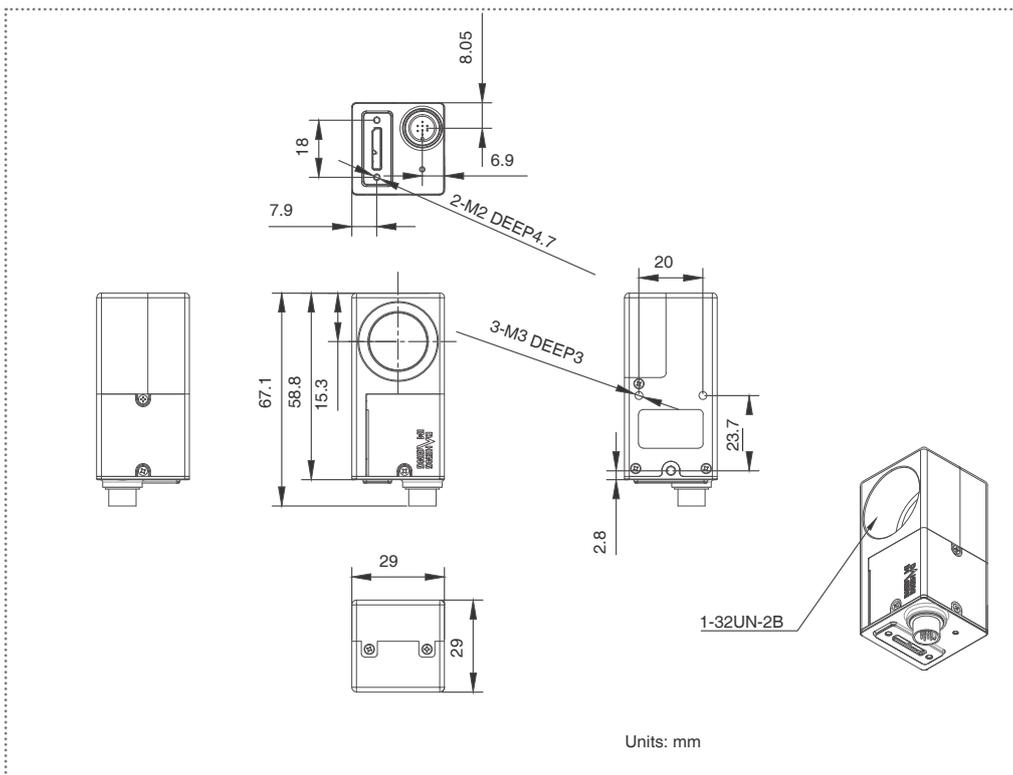
Spectral Response



Technical Drawing



MER2-1220-32U3M/C-W90



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