MER2-502-79U3M POL

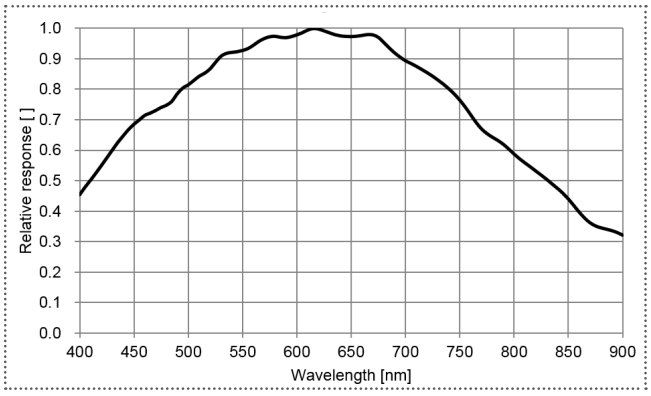
MERCURY2 Series 5MP CMOS Polarization camera

The MER2-502-79U3M POL camera is a polarization camera with the Sony IMX250 MZR CMOS sensor, and capture image of four different light directions simultaneously. Polarization camera can inspect reflective surface such as glass, metal which are difficult for monochrome or color camera. 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 MER2-502-79U3M POL camera is powered over the USB interface and has opto-isolated I/Os. The GPIOs give MER2-U3 maximum flexibility to adapt to specific needs.

Applications

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

Spectral Response



Features

- Trigger mode: Frame Start /Frame Burst Start
- Two exposure time modes: Standard exposure time mode / UltraShort exposure time mode
- Support Timed exposure mode and TriggerWidth exposure mode
- Decimation, Binning, Digital Shift, Noise Reduction, Black Level and Sequencer Control
- Adjustable Gamma and Sharpness for optimizing the brightness and sharpness of images
- 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 and 512KB data storage area

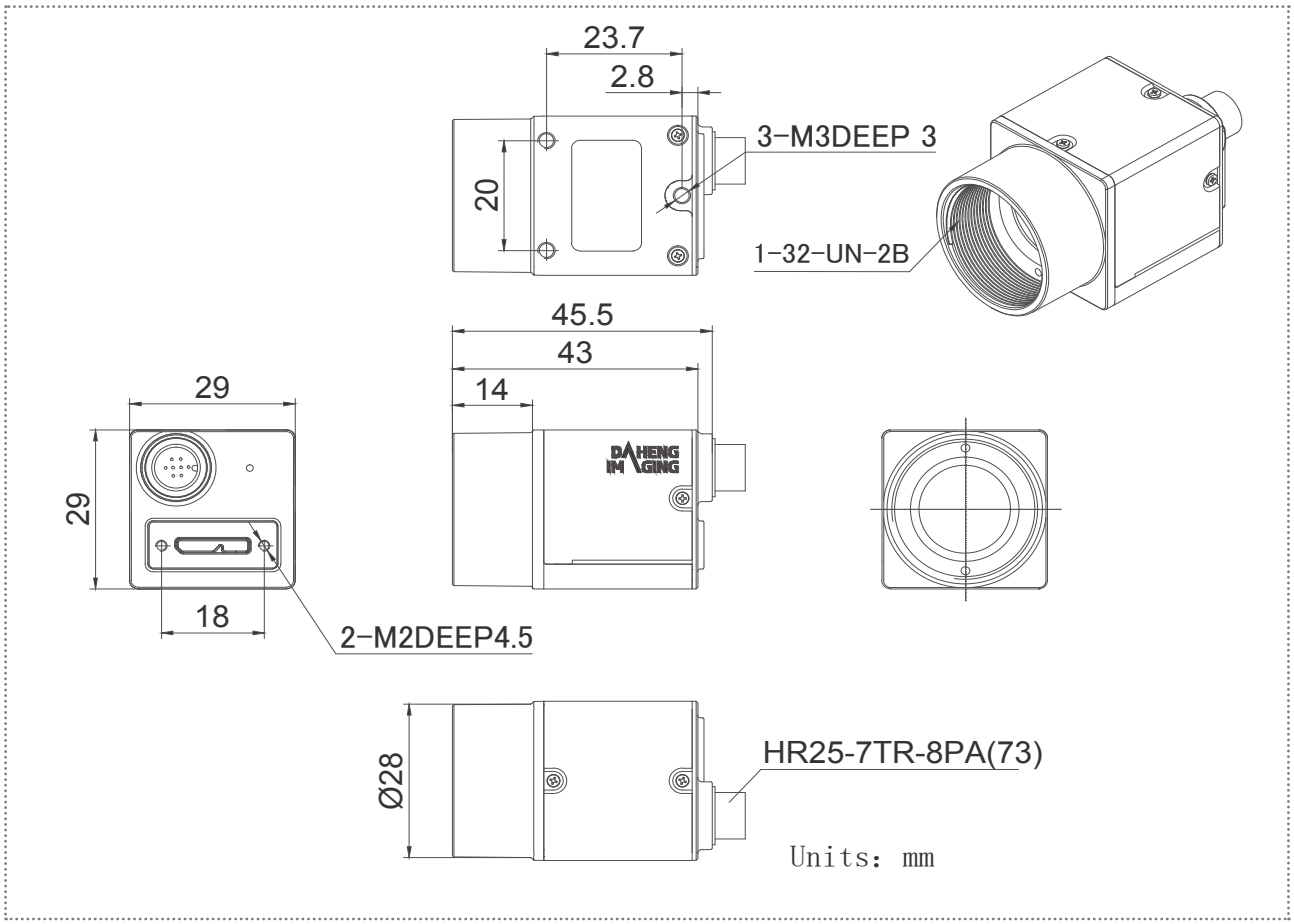
Specifications

Model	MER2-502-79U3M POL
Resolution	2448(H) × 2048(V)
Sensor	Sony IMX250 MZR Global shutter CMOS
Sensor Format	2/3"
Pixel Size	3.45μm × 3.45μm
Frame Rate	79.1 fps
ADC	10 bit
Pixel Bit Depth	8 bit, 10 bit
Mono/Color	Mono polarization
Pixel Formats	Mono8 / Mono10
SNR	40.65 dB
Exposure Time	UltraShort: 1μs~100μs, Actual Steps: 1 μs; Standard: 20μs ~ 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 Sensor: 1×1, 2×2
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
Power Consumption	< 2.7 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)× 29(L) mm (without lens adapter or connectors)
Weight	65 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, UL, USB3.0 Vision®, GenICam®

I/O Interface

Pin	Definition	Core Color	Description
1	Line0+	Green	Opto-isolated input +
2	GND	Blue	GPIO GND
3	Line0-	Grey	Opto-isolated input -
4	NC	Purple	NC
5	Line2	Orange	GPIO input/output
6	Line3	Pink	GPIO input/output
7	Line1-	White Green	Opto-isolated output -
8	Line1+	White Blue	Opto-isolated output +

Technical Drawing



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