ME2S-138-136U3M-SWIR F02

MERCURY2 Super Series 1.3MP CMOS USB3.0 SWIR Camera

The ME2S-138-136U3M-SWIR F02 camera is a SWIR USB3.0 Vision camera with the Sony IMX990 global shutter CMOS sensor and higher performance FPGA. The camera has opto-isolated I/Os that adapt to specific needs. Four-side mounting holes provide maximum installation fexibility for ME2S-U3. Thanks to the extremely compact (29mm × 29mm), robust metal housings and locking screw connectors, the MERCURY2 Super cameras can secure the reliability of cameras deployed in harsh environments.

Applications

Suitable for applications such as wafer inspection, AOI inspection, spots inspection, medical inspection and so on.

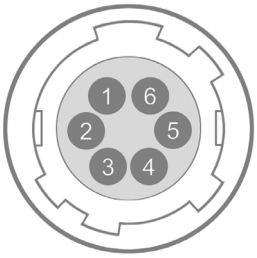
Features

- Two exposure time modes: Standard / UltraShort
- Two trigger modes: Frame Start / Frame Burst Start
- The Sequencer Control supports multiple sets of parameters configuration
- Support Gamma, Binning, Decimation, Digital Shift and Black Level
- Support Static Defect Correction, Dead Pixel Correct, Sharpness, Noise Reduction, Timer and Counter
- Programmable LUTs and User Set Control
- Support Remove Parameter Limit to expand the range of exposure, gain, and so on
- User Data Area for saving algorithm coefficients and parameter configuration

Specifications

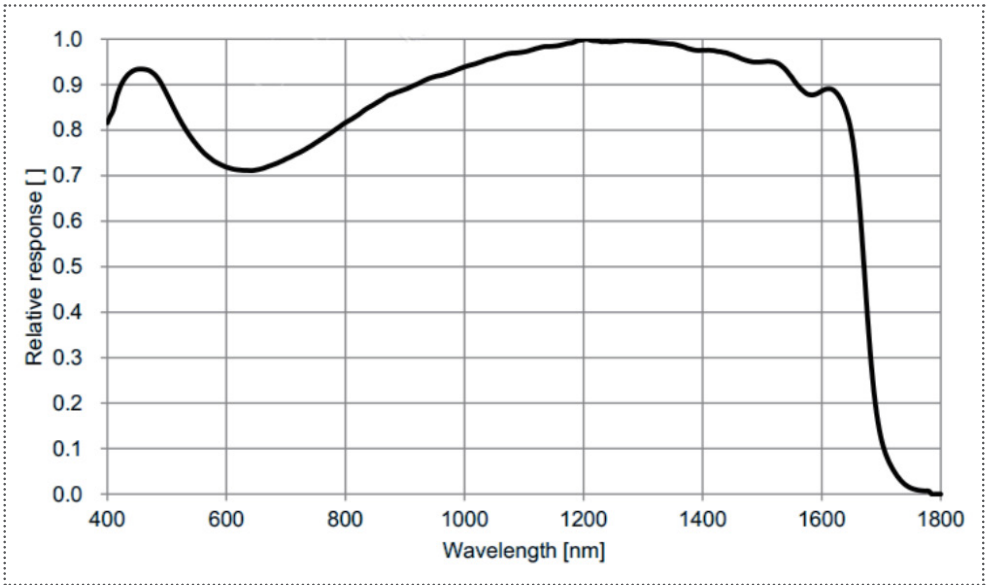
Model	ME2S-138-136U3M-SWIR F02
Resolution	1280(H) × 1024(V)
Sensor	Sony IMX990 Global shutter CMOS
Sensor Format	1/2"
Pixel Size	5μm × 5μm
Frame Rate	136 fps
ADC	8 bit, 10 bit, 12 bit
Pixel Bit Depth	8 bit, 10 bit, 12 bit
Mono/Color	Mono, SWIR
Pixel Formats	Mono8 / Mono10 / Mono12
SNR	50.6 dB
Exposure Time	UltraShort: 3μs ~ 100μs, Actual Steps: 1 μs; Standard: 13μs ~ 1s, Actual Steps: 1 row period
Gain	0dB ~ 24dB; Default: 0dB, Steps: 0.1dB
Binning	1×1, 1×2, 2×1, 2×2
Decimation	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, 1 programmable GPIO
Data Interface	USB3.0
Power Supply	12VDC-10%~24VDC+10% supplied via the camera's Hirose connector or power over USB3.0
Typical Power	3.04 W @ 5 VDC
Operating Temp.	0°C ~ +45°C
Storage Temp.	-20°C ~ +70°C
Operating Humidity	10% ~ 80%
Cooling	Passive Cooling, optional: Heat Dissipation Fins
Lens Mount	C
Filters/Transparent Glass	-
Dimensions	29(W) × 29(H) × 38.8(L) mm (without lens adapter, connectors or Heat Dissipation Fins) 85.2(W) × 29(H) × 38.8(L) mm (without lens adapter or connectors, with Heat Dissipation Fins)
Weight	60 g (without Heat Dissipation Fins)
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

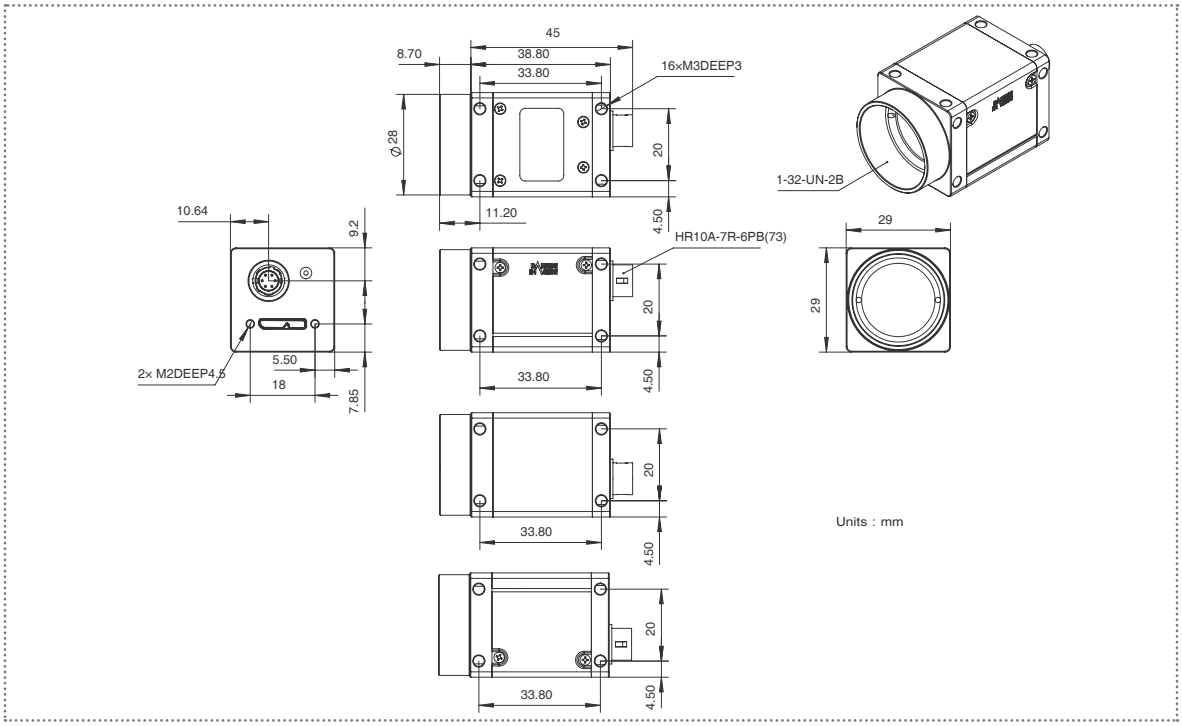


Pin	Definition	Description
1	POWER_IN	Camera external power, +12V DC(-10%)~+24V DC(+10%)
2	Line0+	Opto-isolated input +
3	Line2	GPIO input/output
4	Line1+	Opto-isolated output +
5	Line0-/Line1-	Line0-: Opto-isolated input - Line1-:Opto-isolated output -
6	GND	PWR GND & GPIO GND

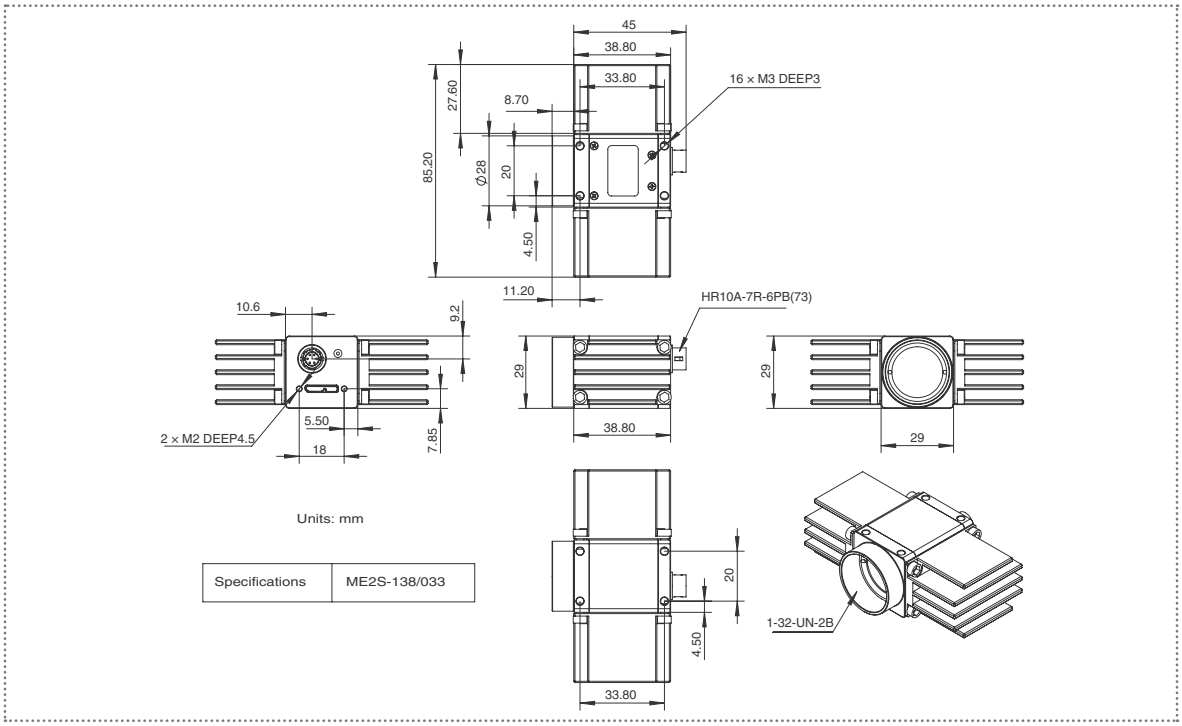
Spectral Response



Technical Drawing



Without Heat Dissipation Fins



With Heat Dissipation Fins

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