

Preliminary

VZ-1300G-M90H00-SWIR

1.3MP CMOS GigE SWIR Area Scan Camera



GIG
VISION

GEN< i >CAM

VZ-1600G-M90H00-SWIR is a SWIR (Short-Wave Infrared) camera. Equipped with the Sony IMX990 sensor using SenSWIR technology, the camera can capture wide band image information ranging from 400nm to 1700nm. VZ-1600G-M90H00-SWIR can replace the traditional "Visible light camera + SWIR camera" dual camera detection scheme. The wide spectral band is suitable for multispectral applications, while the high frame rate of the camera is very suitable for semiconductor inspection applications.

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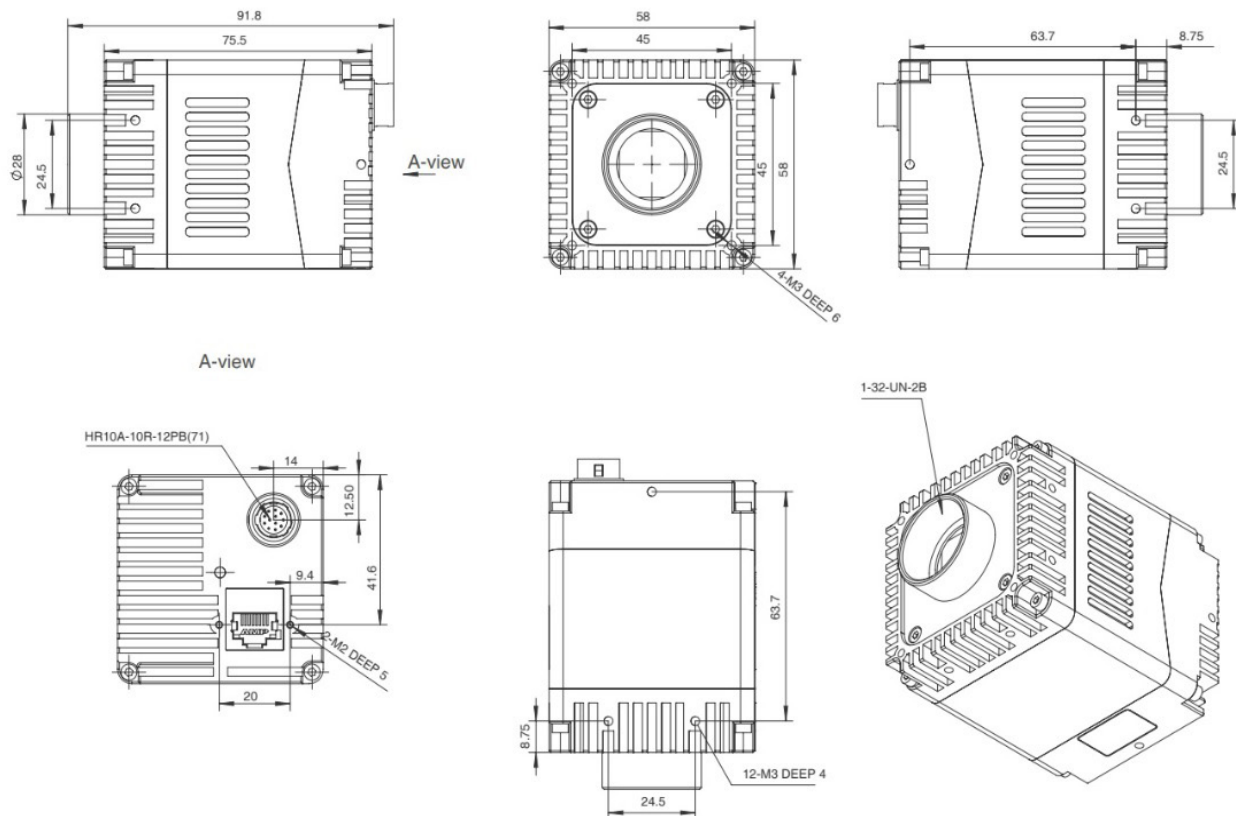
vision.vieworks.com

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Mechanical Dimensions

Unit: mm



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Main Features

- Acquisition Burst Mode
- Stamp, ROI, Binning, Decimation, Reverse X/Y, Sequencer Control
- Timer, Counter, LUT, User Set Control
- Gamma, Black Level, Digital Shift
- Static Defect Correction, Fixed Pattern Noise Correction, Sharpness, Noise Reduction
- Flat Field Correction(FFC), DSNU Control, PRNU Control
- Remove Parameter Limit

Applications

- Industrial Inspection
- Medical Research
- Scientific Research
- Education
- Security

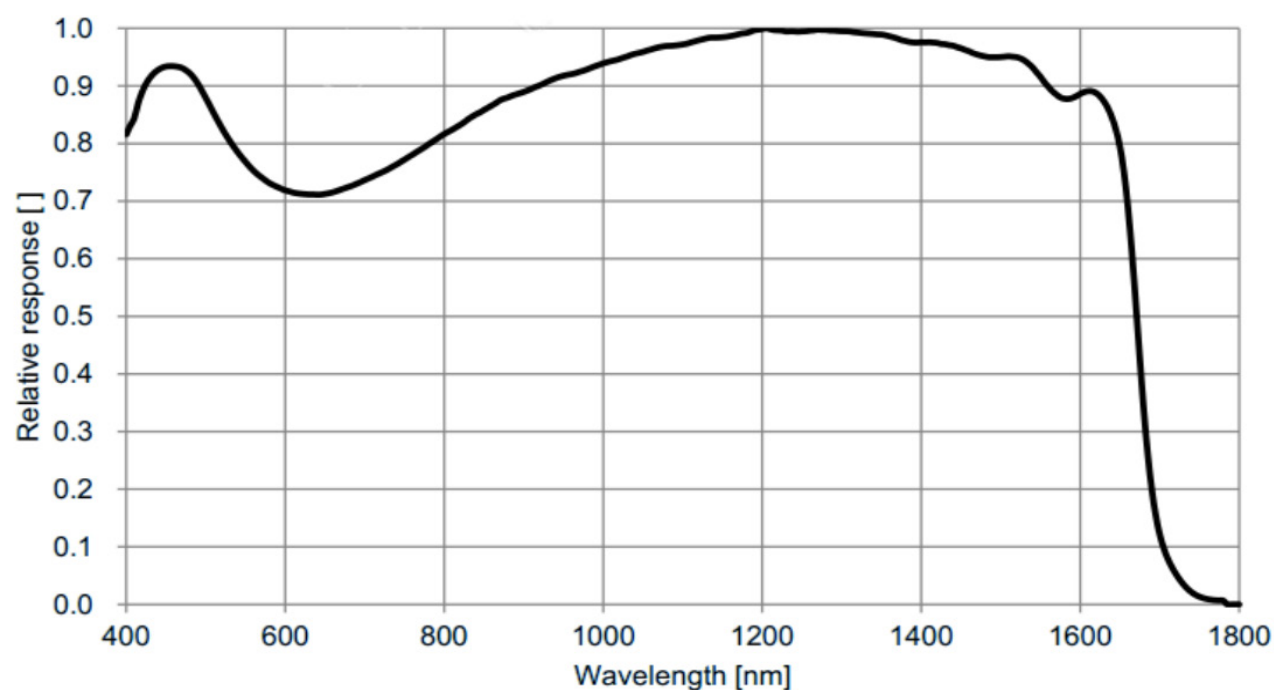
Specifications

Model	VZ-1300G-M90H00-SWIR
Resolution (H x V)	1280 x 1024
Sensor	Sony IMX990 Global shutter CMOS
Sensor Format	1/2"
Mono/Color	Mono, SWIR
Pixel Size	5 μm $\times$ 5 μm
Data Interface	Fast Ethernet (100 Mbit/s) or Gigabit Ethernet (1000 Mbit/s)
Frame Rate	89.7fps (Under acquisition burst high speed mode, acquisition frame rate up to 134fps at sensor bit depth BPP8)
ADC	8 bit, 10 bit, 12 bit
Pixel Bit Depth	8 bit, 10 bit, 12 bit
Exposure Time	Ultrashort: 3 μs to 100 μs , Actual Steps: 1 μs Standard: 13 μs to 1s, Actual Steps: 1 row period
Gain	0dB ~ 24dB, Default: 0dB, Steps: 0.1dB
Binning	1 $\times$ 1, 1 $\times$ 2, 2 $\times$ 1, 2 $\times$ 2
Pixel Formats	Mono8 / Mono10 / Mono12 / Mono10 Packed / Mono12 Packed
Signal Noise Ratio	50.4 dB
Synchronization	Hardware trigger and Software trigger
I/O	1 input and 1 output with opto-isolated, 1 programmable GPIO
Temperature	Operating: 0 $^{\circ}\text{C}$ to 45 $^{\circ}\text{C}$, Storage: -20 $^{\circ}\text{C}$ to 70 $^{\circ}\text{C}$
Operating Humidity	10% to 80%
Power Supply	12VDC-10% to 24VDC+10% supplied via the camera's Hirose connector or PoE (Power over Ethernet, IEEE802.3af compliant)
Power Consumption	13W @ Max. cooling
Cooling Method	Thermoelectric Cooling (TEC)
Cooling Temperature	Typ.: 15 $^{\circ}\text{C}$ $\pm$ 0.5 $^{\circ}\text{C}$ below ambient temp.@room temp.
Lens Mount	C
Dimensions and Weight	58mm(W) x 58mm(H) x 75.5mm(L), 407g
OS	32bit / 64bit Windows
Conformity	CE, RoHS, GenICam®, GigE Vision®

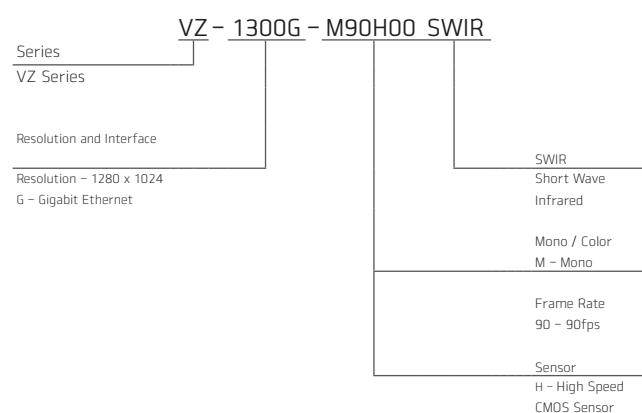
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Spectral Response



Ordering Scheme



Connector Specification

Power/Control



- | | |
|--------------|---|
| 1: Line0+ | Opto-isolated input+ |
| 2: Ground | PWR GND & GPIO GND |
| 3: Line0- | Opto-isolated input- |
| 4: POWER_IN | Camera external power (+12 VDC ~ +24 VDC) |
| 5: Line2 | GPIO input/output |
| 6: RS232 Rx | RS232 receive* |
| 7: Line1- | Opto-isolated input- |
| 8: Line1+ | Opto-isolated input+ |
| 9: GND | PWR GND & GPIO GND |
| 10: GND | PWR GND & GPIO GND |
| 11: POWER_IN | Camera external power (+12 VDC ~ +24 VDC) |
| 12: RS232 Rx | RS232 transmit* |

- 1) The polarity of GPIO pins and power cannot be reversed, otherwise, the camera or other peripherals could be burnt out.
- 2) This model has high power consumption and both pairs of power and ground must be fully connected to the external power.
- 3) *Available for some models

Connectors on camera body