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SWIR Series Camera User Manual

SWIR-V Series SenSWIR InGaAs Camera

VCI-A3UT+SWIR-V Series | USB3.0 | Cooled Industrial Area Scan Camera Using SenSWIR InGaAs

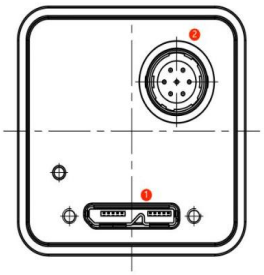
1、SONY SenSWIR InGaAs sensor
2、Built-in TEC orExternal TEC cooling chip
3、Precise temperature control, the temperature difference can reach 10-25 degrees Celsius
4、Spectral response range: 400nm-1800nm
5、5um pixel size
6、Global shutter
7、Supportinterface: USB3 / GigE / MIPI(developing) / CameraLink(developing)
8、12-bit ADC
9、4Gb memory
10、Support external IO trigger control
11、High framerate exceeding official parameters

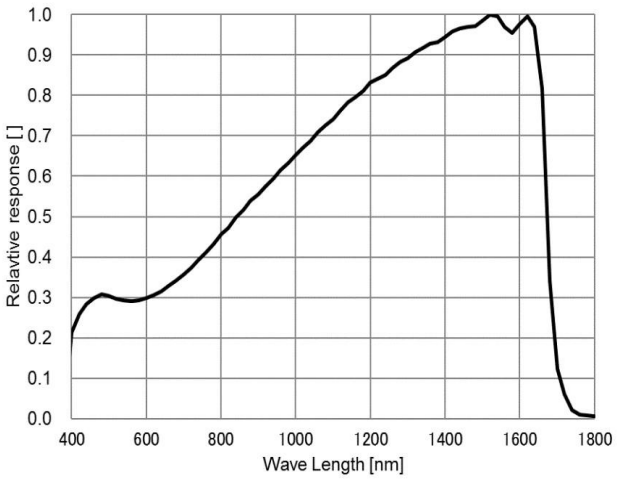
Specification

Model / Parameter	VCI-A3UT500GM-SWIR-V	VCI-A3UT130GM-SWIR-V	VCI-A3UT033GM-SWIR-V
	5.0M pixels 1/1.4" CMOS USB3.0	**1.3M pixels 1/2" CMOS USB3.0**	**0.33M pixels 1/4" CMOS USB3.0**
Sensor model	Sony IMX992-AABJ-C	Sony IMX990-AABJ-C	Sony IMX991-AABJ-C
Sensor type	InGaAs	InGaAs	InGaAs
Spectral range	400nm-1800nm	400nm-1800nm	400nm-1800nm
pixel size	3.45 μm x 3.45 μm	5.0 μm x 5.0 μm	5.0 μm x 5.0 μm
Target size	1/1.4"	1/2"	1/4"
ADC	12 Bit / 8 Bit	12 Bit / 8 Bit	12 Bit / 8 Bit
Frame Rate & Resolution	8 Bit:71@2560x2048、252@1280x1024 12 Bit:35.5@2560x2048、135.7@1280x1024	8 Bit:223fps@1280 x 1024、428fps@640 x 512 12 Bit:118.7fps@1280 x 1024、227.7fps@640 x 512	8 Bit:428.1fps@640 x 512、807fps@320 x 256 12 Bit:227.7fps@640 x 512、429.3fps@320 x 256
Image Buffer	512MByte	512MByte	512MByte
Conversion gain	43.0e/ADU	42.8e/ADU	43.0e/ADU
Conversion gain	59.6dB	58.7dB	59.6dB
Read noise	178.8e	197.6e	178.8e
Full well charge	176.2ke	175.4ke	176.2ke
Maximum SNR	52.5dB	52.4dB	52.5dB
Sensitivity	121mV	121mV	121mV
Dark current	638e/s(20°C)	638e/s(20°C)	638e/s(20°C)
Gain range	1x-15x	1x-15x	1x-15x
Exposure time range	15μs-60sec	15μs-60sec	15μs-60sec
Shutter mode	Global shutter	Global shutter	Global shutter
Binning	Software2x2，3x3，4x4	Software2x2，3x3，4x4	Software2x2，3x3，4x4
Data interface	USB3.0	USB3.0	USB3.0
Digital I/O	1 optocoupler isolated input, 1 optocoupler isolated output, One optical-coupling isolated input	1 optocoupler isolated input, 1 optocoupler isolated output, One optical-coupling isolated input	1 optocoupler isolated input, 1 optocoupler isolated output, One optical-coupling isolated input
Data Format	8bit / 12bit	8bit / 12bit	8bit / 12bit
Optical filter	400-1800nm(default); 1030-1800nm(optional)	400-1800nm(default); 1030-1800nm(optional)	400-1800nm(default); 1030-1800nm(optional)
CRA	2.35 Deg	2.35 Deg	2.35 Deg
Generalparameters			

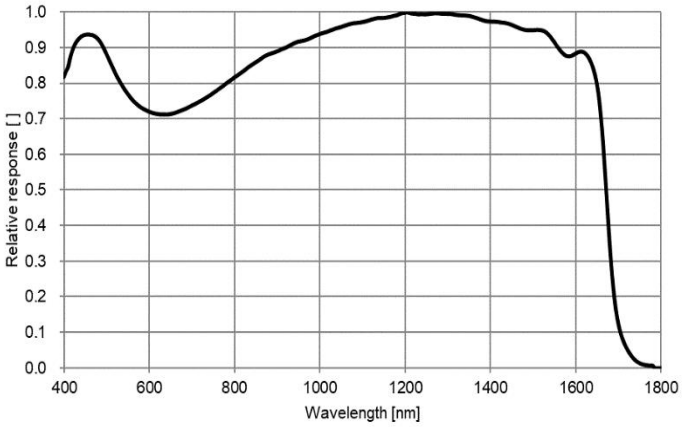
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	<2.11W
Temperature	Working temperature -20~60℃, storage temperature -40~85℃
Humidity	20%-80% , non-condensing
Size and Weight	33mm×33mm×38mm， 70g
Lens mount	C-mount interface
Software	SDK
Operating system	Win32/WinRT/Linux/macOS/Android

Camera Dimensions

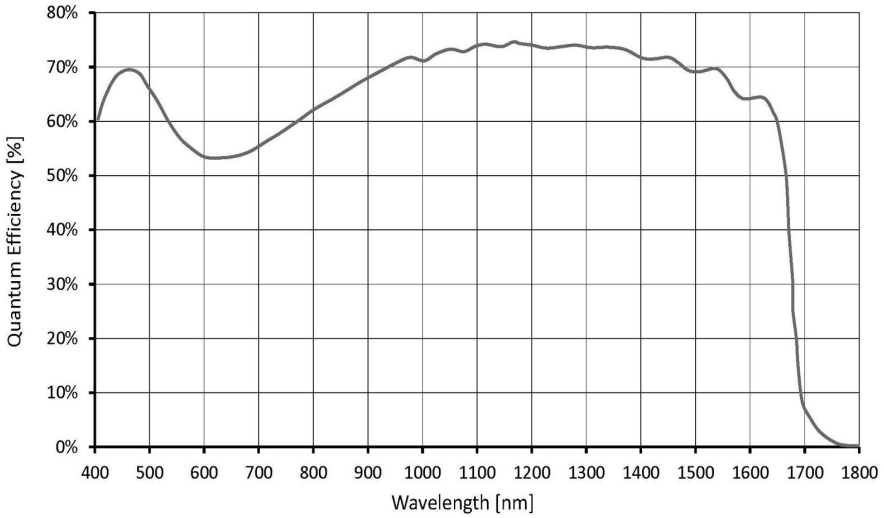




VCI-A3UT033GM-SWIR-V spectral response curve



VCI-A3UT033GM-SWIR-V relative quantum efficiency



VCI-A3UT033GM-SWIR-V absolute quantum efficiency