

SWIR CAMERA SWIR051AU

- Sony IMX990 InGaAs Sensor
- Resolution: 1280 × 1024; Pixel Pitch: 5 μm
- TEC Cooling System Provides 25°C Temperature Differential
- USB 3.0 Interface, Frame Rate up to 200 fps
- Global Shutter
- CE / FCC Certified

SPECTRAL RANGE
400–1700NM



SWIR CAMERA

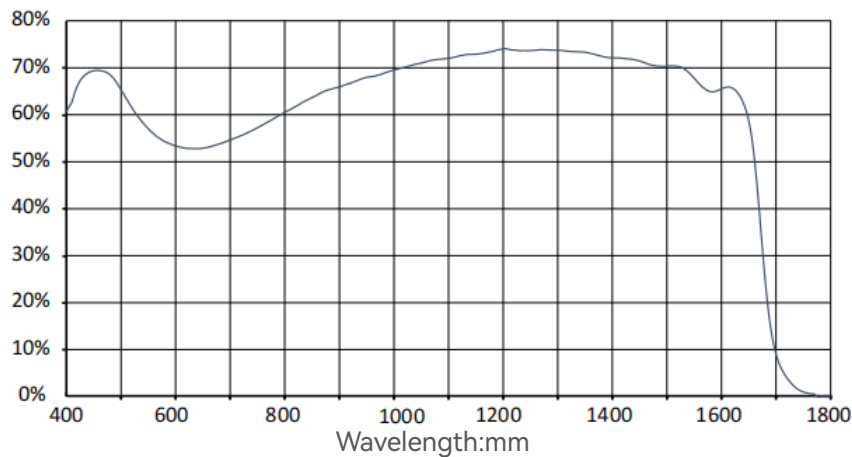
SWIR051AU



• Product Introduction

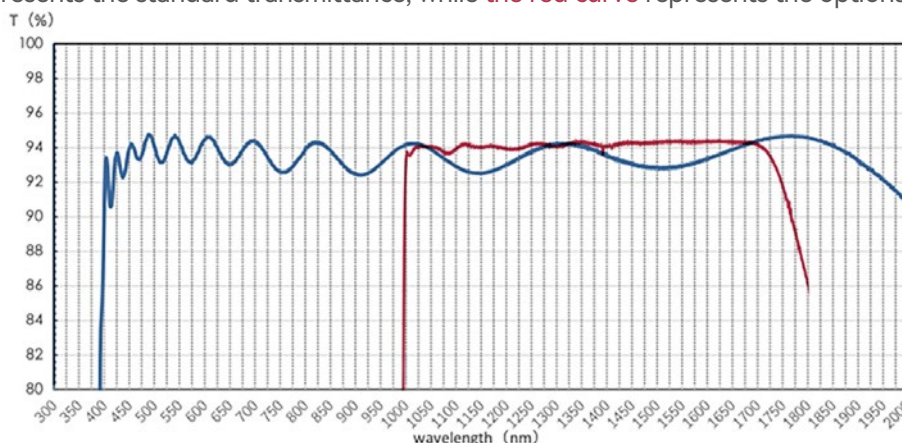
The SWIR051AU is a high-performance short-wave infrared camera that integrates high sensitivity, high frame rate, and exceptional stability. It features the Sony IMX990 sensor, offering 1.3 MP resolution with 5 μm pixel size for superior low-light performance. An integrated TEC cooling system provides a 25°C temperature differential (ΔT) to ensure stable operation. With a USB 3.0 interface, it achieves a full-resolution frame rate of up to 200 fps and boasts a dynamic range of 58.7 dB. Designed for applications demanding high real-time performance and fine detail, the SWIR051AU is an ideal choice for industrial inspection, scientific measurement, and advanced vision systems. It excels in fields such as laser beam profiling, spectral analysis, and imaging through haze or smoke.

• Quantum Efficiency (QE) Chart



• Glass window spectral transmission plot

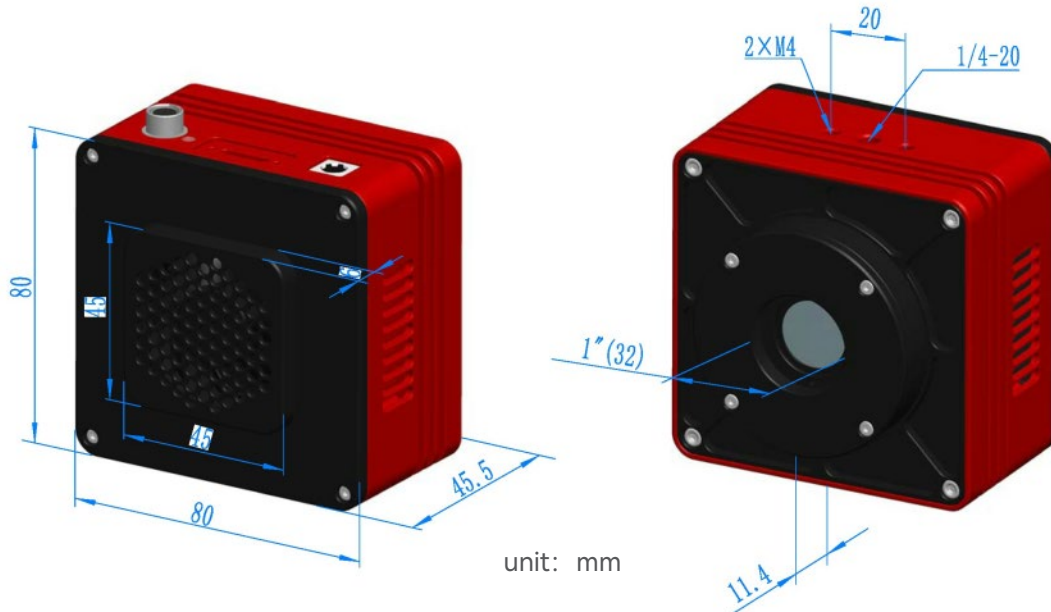
(The blue curve represents the standard transmittance, while the red curve represents the optional transmittance.)






• Specifications




Model	SWIR051AU
Sensor	Sony IMX990 InGaAs
Spectral Range	400nm-1700nm
Pixel Size	5.0μm×5.0μm
Target Size	1/2"
ADC	12Bit/8Bit
Frame Rate & Resolution	8 Bit: 200fps@1280 x 1024、392fps@640 x 512 12 Bit: 108fps@1280 x 1024、209fps@640 x 512
Hardware Image Buffer	512MByte
Dynamic Range	44.3e/ADU
Read Noise	58.7dB
Conversion Gain	211e
Full Well Capacity	181.6ke
Maximum SNR	52.6dB
Sensitivity	121mV
Dark Current	383e/s(0°C)510e/s(10°C)638e/s(20°C)
Gain Range	1x-15x
Exposure Time Range	15μs-60sec
Shutter Mode	Global Shutter
Binning Mode	Software2x2、3x3、4x4
Data Interface	USB3.0
Digital IO	1 channel of optically isolated input 1 channel of optically isolated output 2 channels of non-isolated input/output ports.
Data format	8bit/12bit
Temperature Differential	25°C Below Ambient Temperature
Optical Filter	400-1800nm (Standard configuration) ; 1030-1800nm (Optional accessories)
CRA	2.35°
Power supply method	Powered via USB3.0 Interface or 12V Power Adapter
Power consumption	<25W
Temperature	Operating Temperature-20~60°C, Storage Temperature-40~85°C
Humidity	20%-80%, no condensation
Size	80mm×80mm×45.5mm
Weight	<390g
Lens Mount	C-Mount
Software	AttosView/Complete Software Development Kit (SDK)
Operating System	Win32/WinRT/Linux/macOS/Android
Certification	CE, FCC

• Overall Dimensions



• Packaging List

Standard Items	Specification	Item pictures
1.SWIR CAMERA	SWIR051AU	
2.USB 3.0 data cable	A to B gold-plated data cable, 1.5m in length.	
3.External trigger control line	7-pin connector trigger wire, length 2 meters	

Standard Items	Specification	Item pictures
4.Power cord	Default European standard,Optional US/UK standard configurations	
5.Power adapter	Input:AC100-240V 50/60Hz; Output:DC12V3A	
6.USB flash drive	Includes application software, drivers and instructions	

• Application Examples



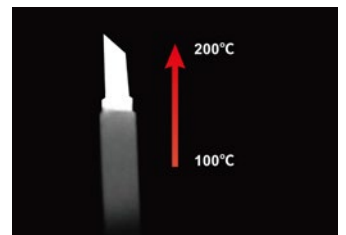
Semiconductor Observation



Long-distance observation



Fruit Moisture Observation



Temperature observation

See everything you need



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