

InGaAs SWIR USB3 camera

Built-in Thermoelectric cooler

High resolution up to 0.33MP

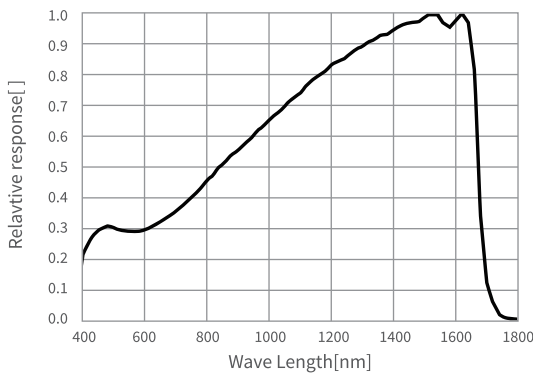
Visible and SWIR imaging 400nm-1700nm

High sensitivity low noise

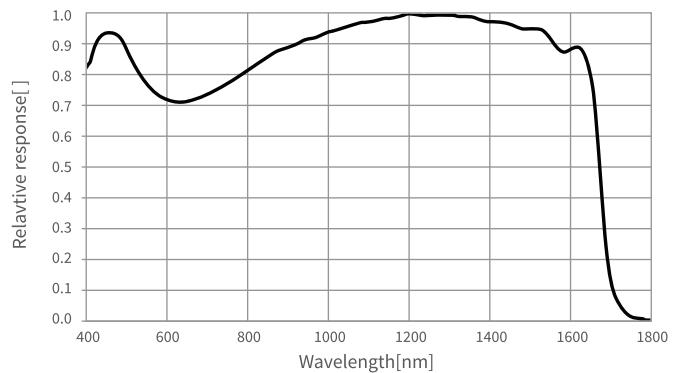
High quantum efficiency

SWIR330KMA is a TE-Cooling USB3.0 InGaAs SWIR camera, which adopts Sony IMX991 1/4-Type Short-Wavelength Infrared (SWIR) Image Sensor. It is suitable to capture images in both visible range and SWIR range, covering 400nm to 1700nm. With smaller pixel size of 5 $\mu$ m, imaging shows higher precision for quantitative researches.

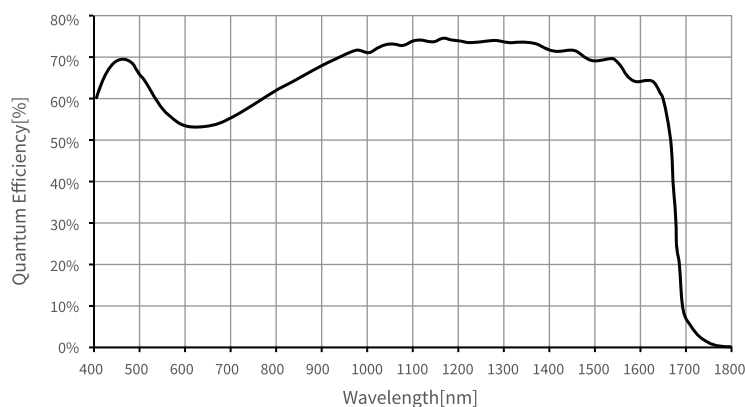
## Spectral Response



SWIR330KMA Spectral Response Curve



SWIR330KMA Relative Quantum Efficiency



SWIR330KMA Absolute Quantum Efficiency

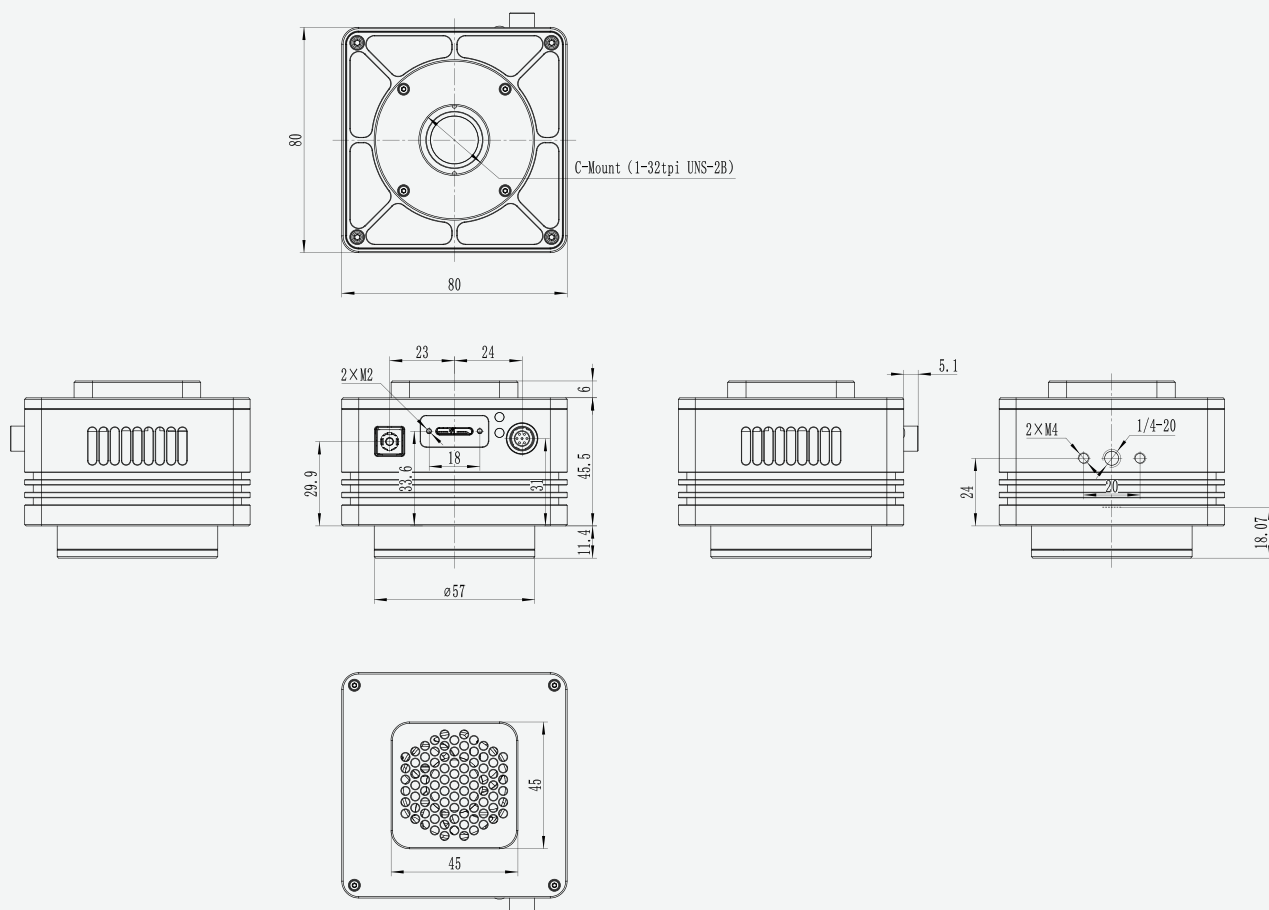
# Specifications

## SWIR330KMA

0.33M pixels 1/4" CMOS USB3.0 industrial camera

|                              |  |
|------------------------------|--|
| Sensor model                 | Sony IMX991-AABA-C   |
| Sensor Type                  | InGaAs   |
| Spectral Range               | 400nm-1700nm   |
| Pixel size                   | 5.0 $\mu\text{m}$ x 5.0 $\mu\text{m}$  |
| Sensor size                  | 1/2"   |
| ADC                          | 12 Bit / 8 Bit   |
| Frame rate                   | 8 Bit: 258.8fps@640x512、486.1fps@320x256<br>12 Bit: 137.7fps@640x512、258.0fps@320x256                        |
| Image Buffer                 | 512MByte   |
| Conversion Gain              | 44.3e/ADU  |
| Dynamic range                | 58.7dB   |
| Readout Noise                | 211e   |
| Full Well                    | 181.6ke  |
| SNRmax                       | 52.6dB   |
| Sensitivity                  | 121mV  |
| Dark current                 | 383e/s(0°C) 510e/s(10°C) 638e/s(20°C)  |
| Gain range                   | 1x-15x   |
| Exposure time                | 50 $\mu\text{s}$ -60sec  |
| Shutter                      | Global shutter   |
| Binning                      | Software2x2, 3x3, 4x4  |
| Data interface               | USB3.0   |
| Digital I/O                  | One optical-coupling isolated input, one optical-coupling isolated output, tow non-isolated input and output |
| Data Format                  | Mono8 / Mono12   |
| Cooling performance          | 25-30°C below ambient temperature  |
| Optical filter               | 400-1800nm(default); 1030-1800nm(optional)   |
| CRA                          | 2.35 Deg   |
| <b>General Specification</b> |  |
| Power supply                 | Power with USB3.0 or 12V Power adapter   |
| Power consumption            | <2.1W(without cooling) / <25W(cooling)   |
| Temperature                  | Working temperature -20~60°C, storage temperature -40~85°C   |
| Humidity                     | 20%-80%, no condensation   |
| Size                         | 80mm × 80mm × 45.5mm   |
| Weight                       | 380g   |
| Lens mount                   | C-mount  |
| Software                     | ToupView/ SDK  |
| Operating system             | Win32/WinRT/Linux/macOS/Android  |
| Certification                | CE, FCC  |

# Technical Drawing



## Product application

Electronic board inspection, solar cell inspection, semiconduction inspection, transmission observation, produce inspection, identifying and sorting, water visualization, temperature observation, surveillance, anti-counterfeiting

Short wave infrared high-end night vision security applications are also the best choice.

