

# GHOPTO SWIR CAMERAS

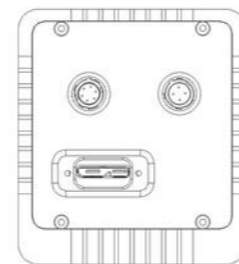
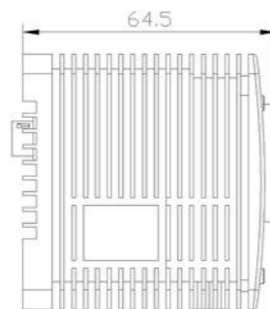
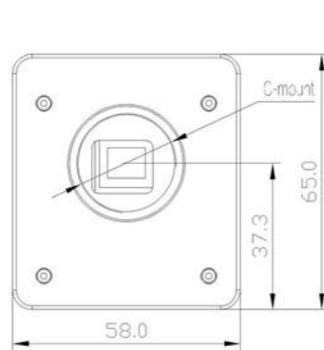
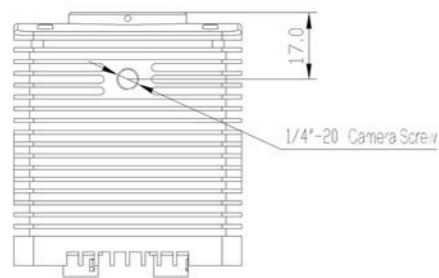
## GH-SW640-U3



This SWIR camera independently developed and designed by GHOPTO has a resolution of 640x512, 15µm pixel pitch, and is equipped with a USB3.0 interface. It can achieve a high frame rate of 240fps and 14-bit digital output at the resolution of 640x512. Windowing (optional) realizes higher rate picture transmission. The camera has TE Cooler built in and lower dark current, and the readout noise is as low as 40e-. In addition, the camera has a variety of gain modes and non-uniformity correction, which can improve high-definition images in low light conditions at night, and can also image through fog and haze. Small in size and light in weight, it is easy to integrate in surveillance systems such as drones, shipborne, and airborne optoelectronic pods. It is widely used in wafer inspection, surveillance, hyperspectral imaging and other fields.

### Features

- ▶ High frame rate, 240fps @ 640x512
- ▶ TEC
- ▶ Low read noise
- ▶ Low dark current
- ▶ USB3.0
- ▶ Windowing
- ▶ Low power dissipation
- ▶ SDK provided



▲ GH-SW640-U3 Camera structure

### SPECIFICATION

TYPE	GH-SW640-U3
Array Type	InGaAs
FPA Format	640 x 512
Active Area	9.6 mm x 7.68 mm
Pixel Pitch	15 µm
Lens mount	M42 x 1
Spectral Response	0.9 µm ~ 1.7 µm ( Optional 0.4 µm ~ 1.7 µm )
Quantum Efficiency	> 70%
Full Well Capacity	1.8Me-
Cooling Capability	TEC
Dark current	30fA@0.1V&18°C
Output	USB3.0
Digital Output	14bit
Frame Rate	240fps@640x512
Windowing	Programmable
Shutter mode	Global shutter
Readout modes	IWR
Exposure time	60 µs ~
Operating Temperature	-20° ~ +70°
Weight	280g (no lens)
Voltage	12V +2V
Dimension ( D x W x H )	65 mm x 58 mm x 65 mm
Power Dissipation	<5W (no TEC)
Trigger Interface	RS-422 / TTL compatible
Noise with ROIC	< 40e- (CDS mode)
Image Correction	1-point & 2-point correction
Software	SDK provided

### APPLICATIONS

- Solar Cell Inspection
- Laser Beam Profiling
- Surveillance and Security
- Plastics Sorting | Airborne Remote Sensing
- Others Medical Imaging | Hyperspectral Imaging