

iBX-SWU640B-240/270



KEY FEATURES

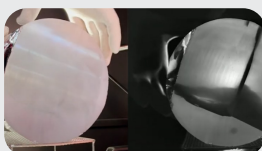
The extended SWIR spectral range up to 2200 nm enhances material contrast beyond conventional SWIR imaging, making it ideal for moisture detection, polymer identification, mineral sorting, and advanced material inspection.

- Spectral range: 1000-1900 / 1200-2200 nm
- 640 × 512 resolution, up to 270 fps
- TEC cooling: up to 70° C below ambient
- USB interface for high-speed data transmission and easy integration

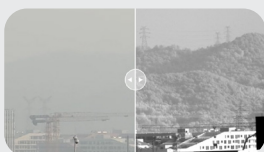
TYPICAL APPLICATIONS



Fruit Spoilage Detection



Inspection of Silicon Wafer



Fog Penetration



Inspection of Contents In Packaging

► IMAGE SPECIFICATION

Model	iBX-SWU640B-240	iBX-SWU640B-270
Resolution	640 x 512	
Frame Rate	240 fps	270 fps
Sensor	InGaAs (3/4" CMOS)	
Pixel Size	15 x 15µm	
Spectral Range	1000-1900nm	1200-2200nm
Bit Depth	14	
Shutter Type	Global	
QE	70%@ 1700nm	70%@ 1900nm
Conversion Gain	/	77.8e ⁻ /DN(LG), 6.6e ⁻ /DN(MG), 2.0e ⁻ /DN (HG)
Dynamic Range	/	71.4dB(LG), 63.4dB(MG), 56.2dB(HG)*
Readout Noise	< 35e ⁻	< 50e ⁻
Full Well Capacity	1.38Me ⁻ (LG), 118Ke ⁻ (MG), 41Ke ⁻ (HG)	1.21Me ⁻ (LG), 102Ke ⁻ (MG), 28Ke ⁻ (HG)
Max SNR	/	60.8dB(LG), 50.1dB(MG), 44.5dB(HG)
Dark Current	<100fA@0.1V&18°C (fA=6250e ⁻ /s)	<25fa@0.1V&18°C; 178K e ⁻ /pixel/s
Exposure Time	16µs~5s	
Data Format	Mono 12 / Mono 14	
Memory	512MByte	
Cooling ΔT	Up to 40° C below ambient	Up to 70° C below ambient

Note: LG: CDS-OFF, DeNoise-ON; MG: CDS-ON, DeNoise-OFF; HG: CDS-ON, DeNoise-OFF

► CONNECTIVITY

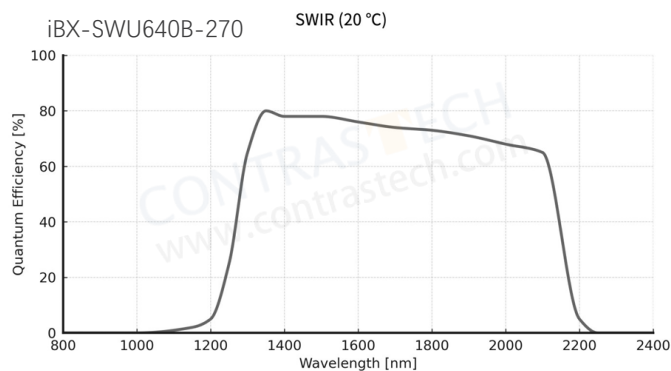
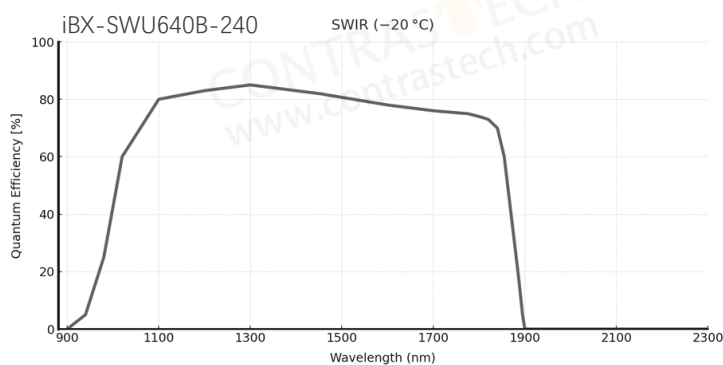
Interface	USB 3.0	
Digital I/O	1 opto-isolated input, 1 opto-isolated output	
Power Supply	DC 12V	
Power Consumption	8.4W (TEC OFF) <16.0W (TEC ON)	7.1W (TEC OFF) <18.2W (TEC ON)
Lens Mount	C-Mount	

► ENVIRONMENT

Storage Temperature	-40~85°C
Operating Temperature	-30~60°C
Humidity	20%—80%, non-condensing

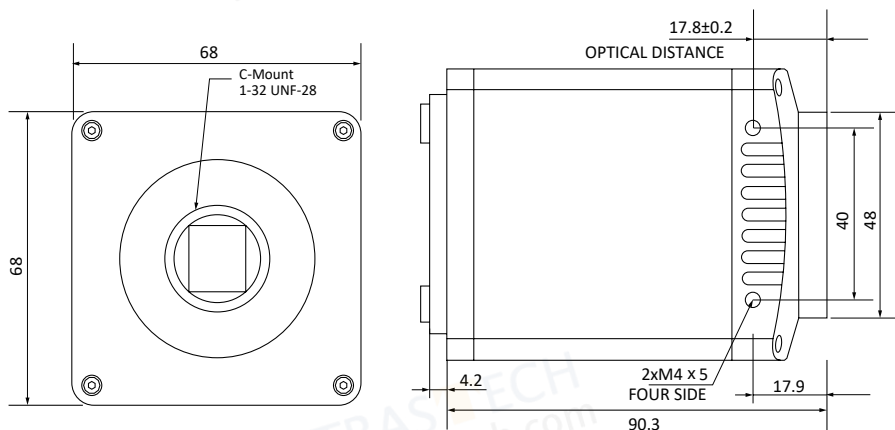
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► SPECTRAL RESPONSE



► DIMENSIONS

Size	68×68×90.3mm (485g)
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Unit: mm

FOR MORE INFORMATION CONTACT



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MORE PRODUCTS

