



SWIR333KMB-5G

FPA0640P15L-17-T1a:with 1-Stage Thermoelectric Cooler

FEATURES

- 640 x 512 pixel resolution
- 0.9 μ m-1.7 μ m Spectral Range
- CLPT InGaAs image sensor
- Up to 500fps @ full resolution
- Global shutter
- 5G Ethernet interface
- ROI in x- and y-direction increases frame rate
- Snapshot ITR/IWR Modes
- Exposure Time can be adjusted

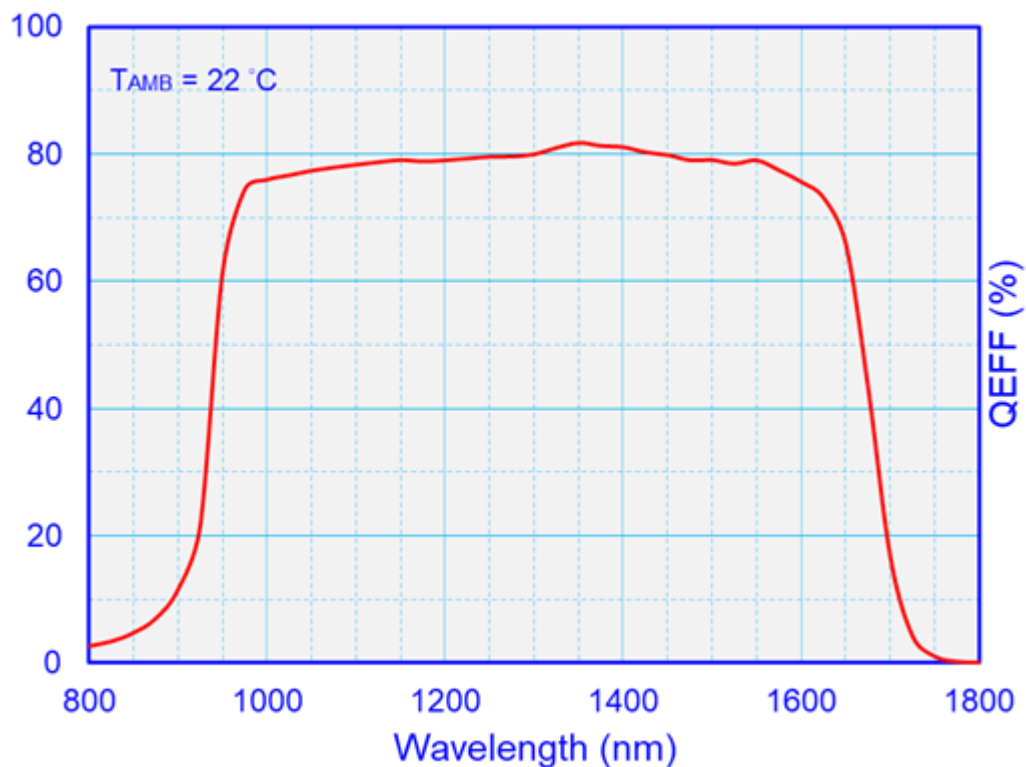
APPLICATIONS

- Near-Infrared Imaging
- Covert Surveillance
- Semiconductor/Solar Panel Inspection
- Medical Science and Biology
- Fiberoptic Telecommunication
- See through Fog / Smoke
- Ice / Slush / Moisture Mapping
- Industrial Thermal Imaging
- Astronomy and Scientific





Quantum Efficiency Image Sensor



Camera Specification

Sensor Model	640P15L-17-T1a
Sensor Type	InGaAs CMOS sensor
Spectral Range	0.9um-1.7um
Pixel Size	15um
Sensor Size	3/4"
Backfocus Length	17.8±0.2mm
Diagonal	12.3mm
ADC	14-bit
Frame Rate& Resolution	500fps@640 x 512
Image Buffer	1024MB
QE	>70%
Conversion Gain	129.303e-/ADU(LG) , 4.845e-/ADU(MG) , 0.777e-/ADU(HG)
Dynamic Range	72.3dB(LG) , 67.1dB(MG) , 56.8dB(HG)
Readout Noise	484.63e-(LG) , 33.63e-(MG) , 17.42e-(HG)
Full Well	1.99Me-(LG) , 75.916Ke-(MG) , 11.988Ke-(HG)
SNRmax	63.0dB(LG) , 48.8dB(MG) , 40.8dB(HG)



SWIR CAMERA

SWIR333KMB-5G

DATASHEET VERS. 1.0(Preliminary) July. 2025

Dark Current	<30fA @0.5V 20°C(This parameter is for reference only, please refer to the actual situation)
Exposure Time	26us-5s
Shutter Type	Global Shutter
Data Interface	5GigE
Digital IO	One optical-coupling isolated input, one optical-coupling isolated output, 2 non isolated input/output
Data Format	Mono 14
Cooling Performance	$\Delta t=45^{\circ}\text{C}$
Dark Correction	Supported
Bad Pixel Correction	Supported
Flat Field Correction	Supported
ROI	Supported



General Specification

Power Supply	DC12V
Power Consumption	18.132W(8bit) , 18.396W(14bit)
Temperature	Working Temperature -30~60°C. Storage Temperature-40~85°C
Humidity	20%-80%, no condensation
Camera Size	70*70*98.5mm (including height of the trigger port and C-mount)
Camera Weight	0.54KG
Mount Type	C Mount
Software	SDK/ToupView



Dimensions

