

100K 384x288 Uncooled Thermal Camera Module

KEY PROPERTIES

- Detector: Uncooled VOx infrared, 384 × 288 pixels
- Spectral Band: 8 ~ 14 μm
- Thermal Sensitivity (NETD): ≤ 40 mK @ F1.0, 25 °C
- Frame Rate: 50 fps (384 × 288)
- Data Interface: USB 2.0, YUY2 format
- Lens Mount: Varies by lens option
- Fixed Focus Lens Options:
 - 9.1 mm (default)
 - 4 mm / 13 mm / 19 mm / 25 mm / 35 mm / 50 mm (optional)
 - Custom focal lengths available on request



FL	4 mm	9.1 mm	13 mm	19 mm	25 mm	35 mm	50 mm
FOV (H)	59.88°	28.42°	20.10°	13.83°	10.53°	7.53°	5.28°
FOV (V)	46.73°	21.5°	15.14°	10.39°	7.91°	5.65°	3.96°

APPLICATION

- Thermography / Outdoor Night Vision / ADAS / Smart Building / Drone
- Security / Machine Vision / Bioenergy Detection / Thermal Inspection

FEATURE

- **384 × 288 VOx Detector:** High-quality thermal imaging for accurate temperature detection.
- **Thermal Sensitivity:** NETD ≤ 40 mK @ F1.0, 25 °C.
- **High Frame Rate:** 50 fps for smooth, real-time thermal video.
- **Compact & Lightweight:** Easy integration into drones, handheld devices, and industrial systems.
- **Uncooled Technology:** No cooling system required; low power and cost-efficient.
- **Rugged & Reliable:** Performs in harsh environments.
- **Flexible Lens Options:** 9.1 mm default, others available on request.

INTRODUCTION

The GTCM100K50U is a compact uncooled thermal camera module featuring a 384 × 288 VOx infrared detector. Designed for precision and reliability, the module delivers clear thermal imaging with high sensitivity (NETD ≤ 40 mK) and smooth 50 fps performance, while its lightweight, rugged construction ensures stable operation in harsh environments.

Flexible lens options, including a 9.1 mm default and other focal lengths available on request, allow customization of the field of view for various applications. With low power consumption and uncooled operation, the GTCM100K50U provides an efficient, versatile, and cost-effective solution for drones, security, industrial inspection, research, and other professional thermal imaging tasks.



SPECIFICATIONS

Model	GTCM100K50U
Detector Parameter	
Sensor	Uncooled VOx infrared detector, ceramic package
Image Pixels & Resolution	384(W) x 288(H)
Pixel Size	12μm
Thermal Sensitivity (NETD)	≤40mK @ F1.0, 25 °C
Spectral Band	8μm ~ 14μm
Image Processing & Adjustment	
Color Palette	Black Hot, White Hot, Iron Red, Rainbow, 10 in total
Special Function	Non-uniformity correction, X and Y directions mirroring
Thermal Time Constant	<12ms
Image Transfer Rate	50fps @384x288
Power & Interface	
Operating Voltage	5 ~ 28 V DC (typical 5 V DC)
Power Consumption	≤1.2W
Data Interface	USB 2.0
Connecting Port	USB Type C
Communication	UART
Operating System Request	UVC (USB Video Class) Compliant support (no drivers needed, OTG)
Environmental Conditions	
Operating Temperature	-40°C ~ +80°C
Storage Temperature	-45°C ~ +85°C
Physical Feature	
PCBA Dimensions (excludes lens)	28x28x36.5mm
Weight (excludes lens)	≤46g
Lens	
Lens Parameters	Default: FL9.1mm Optional: FL4 / FL13 / FL19 / FL25 / FL35 / FL50
Lens Holder	Varies by lens option

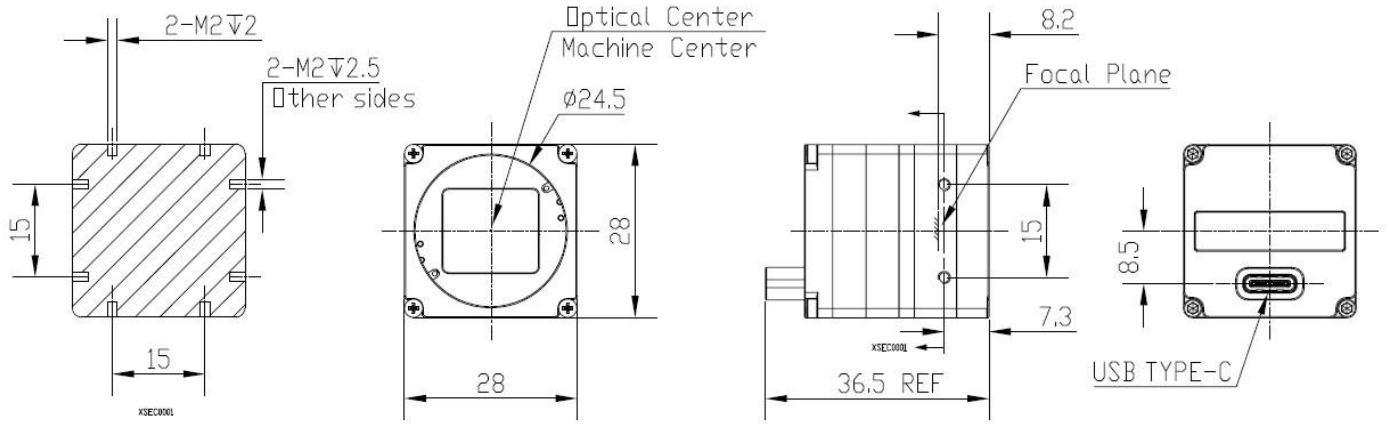
Note:

Product images are for reference only. Specifications are subject to change without notice due to continuous product improvement. For the latest information, please contact us.

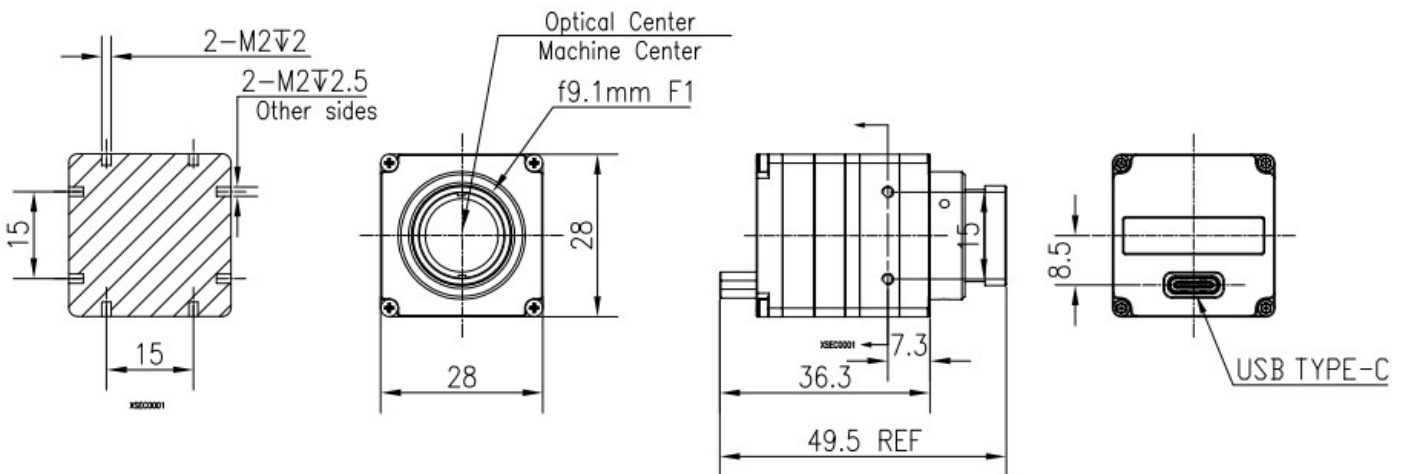


DIMENSIONS

without FL



with FL9.1mm (default)



with FL25mm (optional)

