

## 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)
  - 4mm / 13 mm / 19 mm (optional)
  - Custom focal lengths available on request



FL	4mm	9.1mm	13mm	19mm
FOV (H x V)	59.88°x46.73°	28.42°x21.50°	20.10°x15.14°	13.83°x10.39°

### 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 GTCM100K50UC 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 GTCM100K50UC provides an efficient, versatile, and cost-effective solution for drones, security, industrial inspection, research, and other professional thermal imaging tasks.

**SPECIFICATIONS**

<b>Model</b>	GTCM100K50UC
<b>Detector Parameter</b>	
<b>Sensor</b>	Uncooled VOx infrared detector, ceramic package
<b>Image Pixels &amp; Resolution</b>	384(W) x 288(H)
<b>Pixel Size</b>	12 $\mu$ m
<b>Thermal Sensitivity (NETD)</b>	$\leq 40\text{mK @ F1.0, 25 }^{\circ}\text{C}$
<b>Spectral Band</b>	8 $\mu$ m ~ 14 $\mu$ m
<b>Image Processing &amp; Adjustment</b>	
<b>Color Palette</b>	Black Hot, White Hot, Iron Red, Rainbow, 10 in total
<b>Special Function</b>	Non-uniformity correction, X and Y directions mirroring
<b>Thermal Time Constant</b>	<12ms
<b>Image Transfer Rate</b>	50fps @384x288
<b>Power &amp; Interface</b>	
<b>Operating Voltage</b>	5~28 V DC (typical 5 V DC)
<b>Power Consumption</b>	$\leq 1.2\text{W}$
<b>Data Interface</b>	USB 2.0
<b>Connecting Port</b>	USB Type C
<b>Communication</b>	UART
<b>Operating System Request</b>	UVC (USB Video Class) Compliant support (no drivers needed, OTG)
<b>Environmental Conditions</b>	
<b>Operating Temperature</b>	-40 $^{\circ}\text{C}$ ~ +80 $^{\circ}\text{C}$
<b>Storage Temperature</b>	-45 $^{\circ}\text{C}$ ~ +85 $^{\circ}\text{C}$
<b>Physical Feature</b>	
<b>PCBA Dimensions (excludes lens)</b>	20mm x 20mm x 38.2mm
<b>Weight (excludes lens)</b>	$\leq 26\text{g}$
<b>Lens</b>	
<b>Lens Parameters</b>	Default: FL9.1mm Optional: FL4 / FL13 / FL19
<b>Lens Holder</b>	Varies by lens option

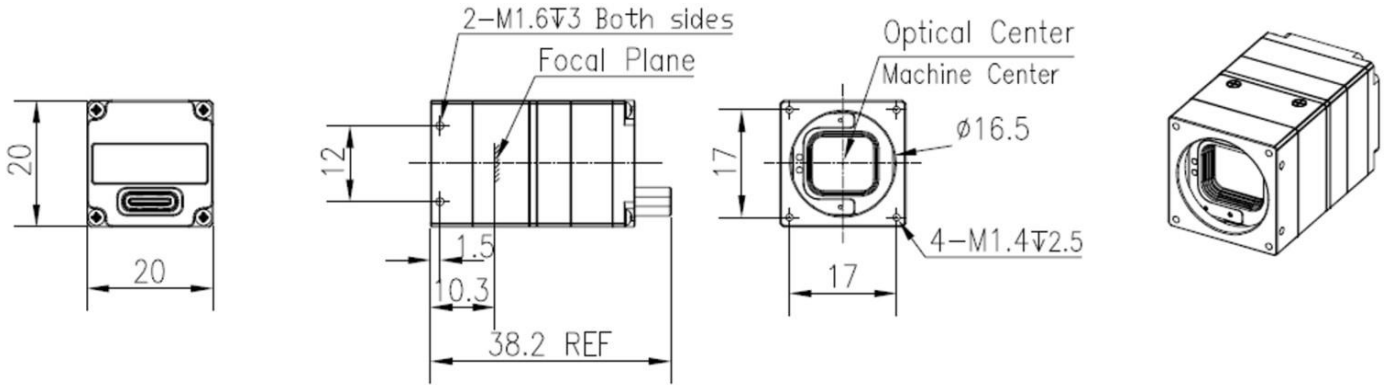
**Note:**

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)

