



## 10K 120x90 Thermal Imaging Module

### Key Properties

WLP VOx infrared sensor 120x90 pixels

Spectral Band: 8 $\mu$ m ~14 $\mu$ m

Thermal Sensitivity(NETD): <60mK @25°C

Frame Rate: 25Hz @10K(120x90)

Data Output: 14bit Raw

Data Interface: SPI / DVP

Connecting Port: FL2.3/50°: 34PIN, FL1.2/90°: 40PIN

Fixed Focus Lenses: Default: FL2.3mm/ 50°

Option: FL1.2mm / 90°



### Application

Thermography / Night Vision /Thermal Inspection / Smart Building

AIoT / Machine Vision / Bioenergy Detection / Epidemic Prevention

### Feature

- **Resolution:** A 120x90 pixel sensor array.
- **Thermal Sensitivity:** NETD <60mK, high sensitivity detection of temperature differences.
- **Compact and Lightweight:** Designed for easy integration into various thermal imaging applications, such as Thermography, Epidemic Prevention, Smart Hardware, AIoT etc.
- **Uncooled Technology:** Utilizes a microbolometer or other similar uncooled infrared detector, making it more energy-efficient and cost-effective.
- **Cost-Effective:** Lower initial and maintenance costs.

### Introduction

TCM10K25SF adopts exceptionally small size wafer level package infrared detector and basic image processing circuit to quickly obtain thermal images and heat distribution of the target area.

As WLP technology, the thermal module achieves small structure, low cost expenditure, while providing higher sensitivity and high image quality at an affordable price, allowing customers to choose the most suitable type according to their requirements. Its super miniature structure and ultralow power consumption are convenient to be integrated into various inspection tools, smart devices, handheld infrared thermal images or mobile terminals with strict requirements on cost, size and weight. Due to its fully optimized structure, TCM10K25SF thermal module is popular and widely used in infrared thermal imaging applications such as Thermography, Epidemic Prevention, Smart Hardware, AIoT etc.



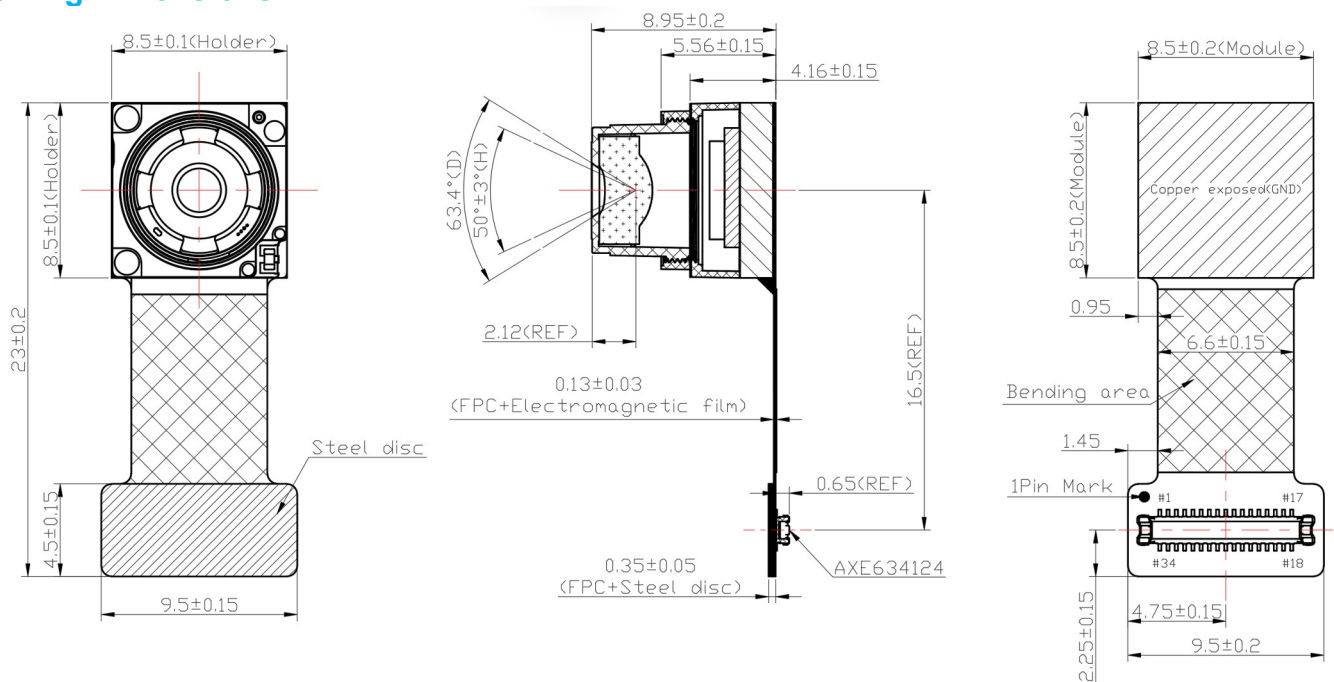
## Specifications

Model	TCM10K25SF
Sensor	WLP VOx infrared sensor
Spectral Band	8μm ~14μm
Image Pixels & Resolution	120(H) x 90(V)
Pixel Pitch	17 μm
Sensor Area	2040 μm x 1530 μm
Thermal Sensitivity (NETD)	<60mK @25°C
Image Transfer Rate	25Hz @120x90
Output Data	14bit Raw
Data Interface	SPI / DVP
Non-uniformity	< 5%
Connecting Port	FL2.3/50°: 34PIN, FL1.2/90°: 40PIN
Lens Parameters	Default: FL2.3mm/ 50° Optional: FL1.2mm / 90°
Operating Voltage	AVDD 3.6V±0.05V VSK 4.7V±0.05V DOVDD 1.8/3.3V±10% DVDD 1.8V±0.05V
Power Consumption	45mW
Operating Temperature	-40°C ~ 70°C
Storage Temperature	-45°C ~ 85°C
PCBA Dimensions	FL2.3/50°: 8.5X8.5X9.16mm, FL1.2/90°: 12X10X5.58mm )
Weight	≤ 2g
SDK Support	Android / Linux / Windows

Specifications are subject to change without notice.



## Drawing Dimensions



## Shutter Drawing

