

Turing L384

Uncooled Infrared Thermal Module



• Pixel Pitch 12 μm • Resolution 384 \times 288

Product Introduction

The Turing L384 uncooled infrared thermal module represents a further technological breakthrough, redefining the industry standard for Size, Weight, and Power (SWaP³) in OEM infrared cores. It meets the professional demands of fields such as inspection, security, search and rescue, and industrial monitoring, while also providing an excellent compact, high-resolution solution for consumer products.

Product Highlights



SWaP³ Design

- 384 \times 288 resolution, 18 mm \times 18 mm dimensions, with a bare core weight of 4.8 g (without lens); a low-cost solution



Excellent Performance

- Supports a shutterless non-uniformity correction (NUC) algorithm, providing a smooth and uninterrupted user experience



Versatile Options

- FoV coverage from 10° to 90°; supports USB, BT.656, and analog video interfaces
- Equipped with a leading programmable module, featuring a flexible architecture, rich functionality, and strong customizability

Product Parameters

Specifications

Detector Type	VOx uncooled infrared focal plane detector
Spectral Range	8 μm - 14 μm
Pixel Pitch	12 μm
Resolution	384×288
NETD	≤50 mK @ 25°C (≤40 mK optional)
Detector Frame Rate	50 Hz (Imaging), 25 Hz (Temperature measurement)

Image Adjustment

Brightness / Contrast Adjustment	Manual mode / Automatic mode
Polarity	Black hot / White hot
Pseudocolor	Supported
Crosshair	Display / Hide / Move
Image Processing	Digital filtering noise reduction / Digital detail enhancement
Nonuniformity Correction	Shutter correction / Shutterless algorithm correction
Image Mirroring	Left/Right / Up/Down / Diagonal
Focusing Method	Athermalized prime lens

Temperature Measurement

Temperature Measurement Range	-20°C to +550°C (650°C customizable)
Temperature Measurement Accuracy (Typical value)	±3°C or ±3% of reading (whichever is greater) @ ambient temperature -20°C to 60°C
Temperature Measurement Tools	Analysis tools: spot, line, area

Electrical Parameters

Power Supply Voltage (Typical)	3.8 V to 5.2 V DC / 1.8 V / 3.3 V
Typical Power Consumption @ 25°C	≤0.35W
Analog Video	PAL format
Digital Video	BT.656/BT.1120/LVCMOS/MIPI/USB2.0
Serial Communication Interface	UART/USB

Physical Characteristics (Excluding Lens and Flange)

Dimensions (W×L×H)	18×18mm
Weight	<4.8g

Optional Lenses

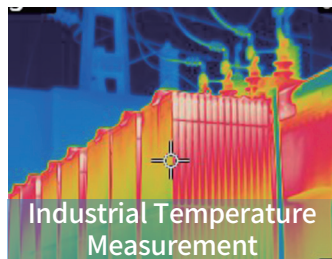
Lens (mm)	2.88/5.3/9.1/19
-----------	-----------------

Environmental Adaptability

Operating Case Temperature	-40°C to +80°C (-20°C to 60°C Temperature measurement)
Storage Case Temperature	-45°C - +85°C
Humidity	5% to 95%, non-condensing
Vibration	6.06 g, random vibration, all axes
Shock	80 g @ 4 ms, sawtooth waveform, 3 axes / 6 directions

*This information is for reference only. Images and technical specifications are subject to change without notice.

Applications



Company Profile

Raytron Microelectronics Co., Ltd. is a wholly-owned subsidiary of Raytron Technology Co., Ltd., providing global customers with infrared detectors, core modules, and industry solutions.

Our products are widely used in various fields, including infrared temperature measurement, night vision observation, machine vision, intelligent driving, Commercial Drone, smart industry, security monitoring, Internet of Things, medical epidemic prevention and gas detection.

With the mission of "to create incremental value for customers with technological advancements", we are committed to leaving a name in the history of constantly expanding human perception capabilities.



Official Website



LinkedIn Official Account

Raytron Microelectronics Co., Ltd.
 Phone: 400-998-9038
 Email: marketing@raytrontek.com
 Website: www.raytron-microelectronics.com
 Version: PL202510V1