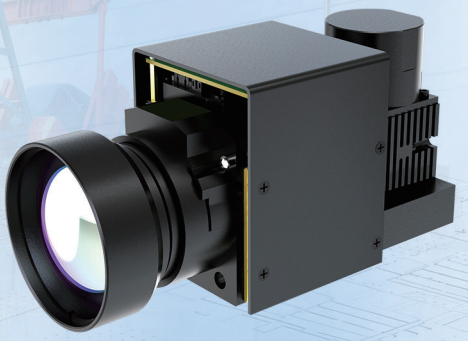
Raytron | Raytron OEM

Photon C330L

Cooled Infrared Gas Detection Module

The Photon C330L series is specifically designed for detecting VOCs (Volatile Organic Compounds) leaks near the 3.3μm band, converting invisible gas leaks into visible infrared images. Integrated with a linear Stirling cooler, it offers long operational life and high sensitivity, meeting the requirements of handheld and fixed online monitoring devices. Supporting multiple digital video interfaces and compatible with various fixed-focus and continuous zoom lenses, it is ideal for oil & gas extraction, transportation, chemical industry, and environmental monitoring. Comprehensive SDK is provided to offer a complete solution for secondary development.



High Sensitivity and Exceptional Gas Visualization

Equipped with a self-developed gas-specific detector and advanced image algorithms, achieving NETD as low as 10mK.

Long Service Life and 24/7 All-weather Imaging

Powered by a linear Stirling cooler with MTTF up to 20,000 hours, supporting 24/7 all-weather imaging.

Versatile Configurations for Easy Secondary Development

- Supports multiple output interfaces including RS422, PAL, CameraLink, and RJ45 100M Ethernet for seamless integration.
- Optional lenses include 50 mm, 25-75 mm, and 15-150 mm to suit diverse application requirements.
- Provides SDK with built-in gas coloring algorithms for easy use and secondary development.

Specifications

	Photon C330L
Specifications	
Detector Type	MCT Refrigerated infrared focal plane detector
Resolution	320×256
Pixel Pitch	30μm
Frame Rate	25Hz
F #	1.2
Response Band	3.2~3.4μm
NETD	≤15mK@25℃
Types of Gas Detection	Methane, ethane, propane, butane, isobutane, ethylene, propylene, butene, methanol and the like
Cooled Time@25℃	≤5min
Optional Lens	Straight-tube Focus free :50mm; Straight-tube continuous zoom:25~75mm, 15~150mm
Image Adjustment	
Brightness/ContrastAdjustment	Automatic/manual
Polarity	Black hot/White hot (default), supports 8 false colors
Cross Cursor	Display/hide/move
Electronic Zoom	1.0~8.0×continuous zoom (step 0.1×)
Image Processing	Non-uniformity correction, defective pixel correction, digital filtering noise reduction,digital detail enhancement, scene mode switching, gas enhancement Normal/left/right, up/down, diagonal flip
Image Flip	Left/right, up/down, diagonal flip
Power Source	
Power Supply Range	DC 24V@Cameralink/POE IEEE 802.3BT@Ethernet
Typical Power Consumption @25℃	Stable power consumption≤ 13W (fixed-focus lens), peak power consumption≤ 21W @ Cameralink
Interface	
Analog Video	PAL format@Cameralink
Digital Video	Cameralink/Ethernet
Serial Communication Interface	RS422@ Cameralink/RJ45 100M Ethernet network port@ Ethernet
Physical Properties	
Dimensions (no lens)	150mm×72.8mm×89.5mm
Weight (no lens)	≤824g@Cameralink/≤958g@Ethernet
Environmental Adaptability	
Operating Case Temperature	-20℃~+50℃
Storage Case Temperature	-30℃~+60℃
MTTF	≥15000h
Storage Life	≥10 years

Applications


Gas Detection


Petrochemical Industry


Environmental Monitoring


Gas Transportation

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

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