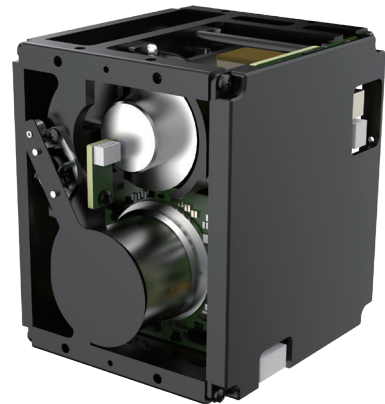


Photon C330H

Cooled OGI Module

The Photon C330H Series is specifically designed for detecting leaks of organic compounds (VOCs) around the 3.3 μm wavelength. It converts invisible gases into visible infrared images. Equipped with a high operating temperature (HOT) cooled infrared gas detector, the C330H features a compact size, low weight, low power consumption (SWaP), high sensitivity, and long service life. It meets the requirements of various civil applications, including handheld devices, online monitoring systems, civil UAVs and other civilian devices. The module supports multiple digital video interfaces and is compatible with both fixed-focus and continuous zoom lenses, making it ideal for applications such as oil and gas exploration, transportation, chemical processing, and environmental monitoring. An SDK is provided to facilitate secondary development and system integration.



Product Highlights

High Sensitivity & Exceptional Gas Visualization

- Equipped with a self-developed gas detector and advanced image processing algorithms, the C330H achieves NETD as low as 10 mK



SWaP Optimization & Long Lifetime

- Compact and efficient with size down to 71.9×65.4×75.5 mm, weight 460 g, cool-down time 3.5 min, and MTTF up to 20,000 h — enabling 24/7 continuous imaging



Temperature Measurement Mode

- Supports temperature measurement from -20°C to 450°C with accuracy of $\pm 2^\circ\text{C}$ or $\pm 2\%$



Flexible Options for Easy Integration

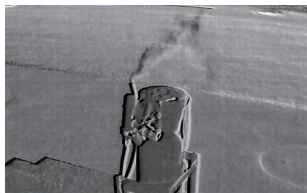
- Compatible with PAL, CameraLink, MIPI, and DVP interfaces, and offers a variety of lenses including 50 mm, 100 mm, 25–75 mm, and 15–150 mm models



Specifications

Photon C330H	
Specifications	
Detector Type	Indium Arsenide Antimonide Cooled Infrared Focal Plane Detector
Resolution	320 × 256
Pixel Pitch	30μm
Frame Rate	25Hz
F #	1.2
Response Band	3.2~3.4μm
NETD	≤10mK@25°C
Types of Gas Detection	Methane, ethane, propane, butane, isobutane, ethylene, propylene, butene, methanol and the like
Cooled Time@25°C	≤3.5min
Optional Lens	Straight-tube motorized Focus free: 50 mm, 100 mm Straight-tube continuous zoom: 25~75 mm, 15~150 mm
Image Adjustment	
Brightness/Contrast Adjustment	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, digital filtering noise reduction, digital detail enhancement, scene mode switching, gas enhancement
Image Flip	Left/right, up/down, diagonal flip
Power Source	
Power Supply Range	12 ± 0.5V DC
Typical Power Consumption @25°C	Stable power consumption ≤ 8W, peak power consumption ≤ 14W
Interface	
Analog Video	PAL
Digital Video	Cameralink/DVP/MIPI
Serial Communication Interface	RS422/UART (3.3V)
External Synchronization	Internal synchronization (default)/external synchronization output/external synchronization input/adaptive synchronization
Temperature Measurement Performance	
Temperature Measurement Range	-20°C ~ 450°C
Temperature Measurement Accuracy	± 2°C (-20°C ~ 100°C), 2% (>100°C)
Temperature Measurement Functions	Full Frame Analysis, Environmental Parameter Calibration, Temperature Span Stretching
Physical Properties	
Dimensions (no lens)	71.9mm × 65.4mm × 75.5mm
Weight (no lens)	350g
Environmental Adaptability	
Operating Case Temperature	-40°C ~ +70°C
Storage Case Temperature	-55°C ~ +70°C
MTTF	≥ 20000h
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



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