

**NEW**

**NEC**

Solution for Surveillance and measurement by new added value!

# Infrared Camera Modules

Making use of the uncooled infrared sensor with crisp image and small pixel pitch.

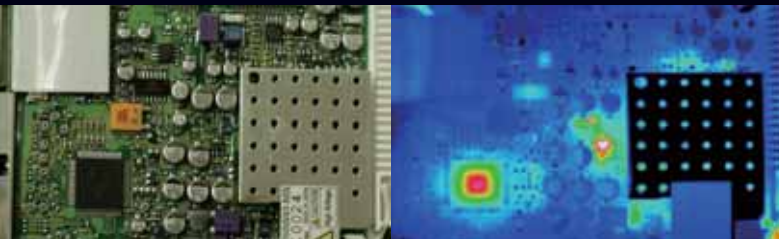
**PALMTOP light and small module is easy to be built up in devices and system.**

**Camera Module *IRM-320V/320T***

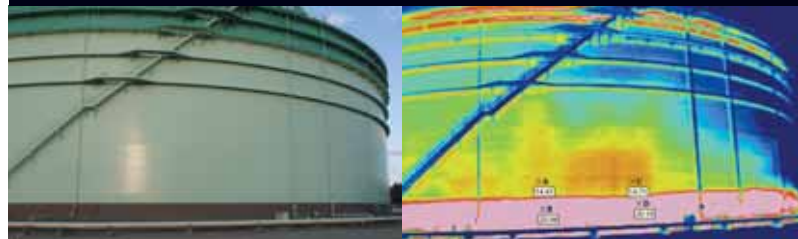
320x240 pixel sensor equipped



**PWB**



**Level of sludge**



**FA (Casting of metal mold)**



**Surveillance at night**



**Customizable according to various needs.**



**NEC Avio Infrared Technologies Co., Ltd.**

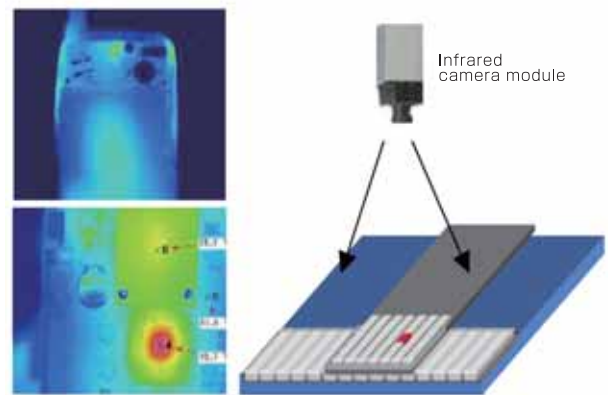
## ■ Infrared camera module (IRM-320V/T) Specifications

Item	IRM-320V	IRM-320T
Detector	Uncooled focal plane array	
Number of Pixels	320 (H) × 240 (V)	
Spectral range	8 ~ 13μm	
Measuring range (IRM-320V:Dynamic range)	L range: -40°C ~ 150°C H range: 0°C ~ 540°C	Range 1: -40°C ~ 120°C Range 2: 0°C ~ 500°C
Minimum detectable temperature difference (With F/1 lens)	L Range: 0.1°C (at 30°C)	Range1: 0.1°C (at30°C)
Measurement Accuracy	—	±4% (Reading) or ±4°C
Range of guarantee of temperature accuracy	—	Range 1: 0 ~ 120°C Range 2: 100 ~ 450°C
Frame rate	Sensor frame rate: 60Hz Video frame rate : 30Hz(NTSC),25Hz(PAL)	
A/D resolution	14bit	
Measurement and display function	Contrast (Auto/Manual) Brightness (Auto/Manual) Monochrome reversing Digital zoom (×2/×4) Range switch (Auto/L/H) Save steep value	Multipoint temperature (5 points) Box Max/Min temperature Average (Σ2、Σ8、Σ16) Automatic Temperature Level and Automatic Sensitivity Tracing Color bar (Gray scale) Emissivity correction Range of display temperature Level/Sensitivity adjustment Operating menu : English/Japanese
Correct function	FPN correction (Auto/Manual)	Ambient correction Interval NUC Response calibration Distance calibration Background compensation
Video output	Composite video : NTSC/PAL	Composite video : NTSC/PAL(With special cable)
Digital output	ITU-R, BT656 video data/ RAW data	RAW data
General purpose interface	RS-232C (With special cable)	
Operating temperature and humidity	-15°C ~ +45°C 90%RH (Not contended)	
Storage temperature and humidity	-40°C ~ +70°C 90%RH (Not contended)	
Power supply	DC +11 ~ 13V	
Power consumption	Approx.5W (TYP) (Ambient temperature:25°C, RUN)	Approx.8W (TYP) (Ambient temperature:25°C, RUN)
Shock resistance (On transit)	294m/s <sup>2</sup> (IEC60068-2-27 / JIS C 60068-2-27)	
Vibration resistance (On transit)	29.4m/s <sup>2</sup> (IEC60068-2-6 / JIS C 60068-2-6)	
Dimensions (mm)	65 (W) × 65 (H) × 114 (D) (With f-8mm lens)	
Weight	< 0.6kg (With f-8mm lens)	

## ■ Infrared camera module (IRM-320V/T) Options

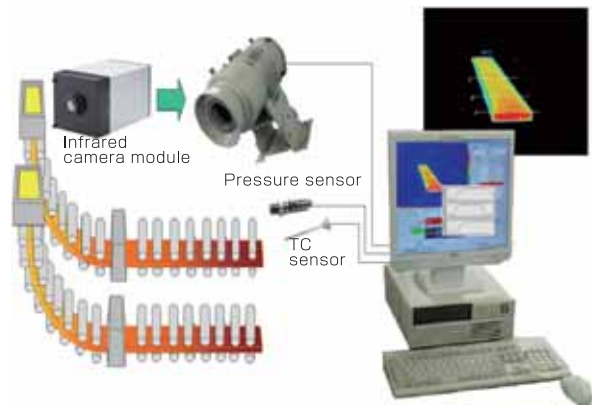
Type	IRM-320V	IRM-320T
f=8mm lens (F/1)	IFOV : 2.94mrad FOV : 50° (H) × 37.5° (V) Focus range : 50cm ~ ∞	
f=14mm lens (F/1)	IFOV : 1.68mrad FOV : 30° (H) × 22.8° (V) Focus range : 1m ~ ∞	
f=25mm lens (F/1)	IFOV : 0.94mrad FOV : 17.1° (H) × 12.9° (V) Focus range : 1m ~ ∞	
f=50mm lens (F/1)	IFOV : 0.47mrad FOV : 8.6° (H) × 6.5° (V) Focus range : 3m ~ ∞	—
Remote controller	TH91-375	
AC adaptor	TH71-360 (plug type A) or TH71-359 (plug type C)	
External connecting cable	IRM32-306	

## System configuration examples System of inspection of temperature for battery



By observing temperature of the battery cell, the troubled products are eliminated.

This system can measure temperature of the metal sticks, speed of pulling them from the belt conveyor and the flow of cooling spray. Alarm is put out when the camera find the trouble. You can analyze the failure of products speedy.



### CAUTION FOR SAFETY

- Please read "WARNING" & "CAUTION" in the operation manual attached to the product carefully for proper operation before using the product.
- Infrared camera module is controlled by the export law. When you reexport this product from your country, the export license of your country is required.

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