



CoolEYE IR Image Sensors

Temperature Sensing and Imaging

TPA 32.16C 5471 L7.1 , TPA 32.32C 5371 L7.1 Infrared Image Sensor

Target Applications

- Non-Contact Temperature Measurement
- Smart Home Applications
- Presence Detection

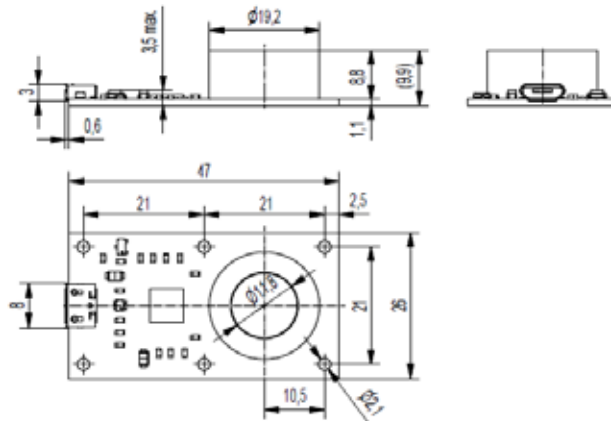
Features and Benefits

- Digital USB Interface, SPI optional
- Factory Calibration
- Ambient Temperature Output

Product Description

This new CoolEYE Product family offers spatial resolution from 512 to 1024 pixels. With this it offers low-resolution infrared imaging. It is featured by parallel read out with fast response.

The new module series consists of an new array sensor and small microprocessor which provides a calibrated signal and acts as the Bus interface. These modules are supplied with a micro USB connector.



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Parameter	Symbol	TPA 32.16C 5471 L7.1	TPA 32.32C 5371 L7.1	Unit	Conditions
Pixel configuration		32 x 16	32 x 32		
Operation Conditions					
Operating Voltage	V_{DD}	5		V	by USB Interface
Supply Current	I_{DD}	35		mA	I
Operating Temperature	T_o	-20...+80		°C	$T_{obj}=25^{\circ}C$
Sensor Characteristics					
Sensitive Area	A	7 x 3,5	7 x 7	mm ²	
Signal Offset	Offs	32767		counts	$T_{obj}=25^{\circ}C / T_{amb}=25^{\circ}C$
Sensitivity	S_{40}	16		counts/°C	$T_{obj}=40^{\circ}C / T_{amb}=25^{\circ}C$
Sensitivity	S_{80}	25		counts/°C	$T_{obj}=80^{\circ}C / T_{amb}=25^{\circ}C$
Noise	N	20		counts	$T_{obj}=25^{\circ}C / T_{amb}=25^{\circ}C$
Ambient Temperature Sensor Characteristics					
Sensitivity		300		counts/°C	linear for T_{amb} 0...90°C
Count @ $T_{amb} = 25^{\circ}C$		16000		counts	
Noise		20		counts	
Optical Characteristics					
Field of View	FoV	60 x 30	60 x 60	Degree	peak to peak
Optical Axis	OA	-10...+10		Degree °	
Spectral range		8...14		µm	
Interface Characteristics					
USB 2.0					
Device Class		CDC			Communication Device Class
Frame rate		65	115	ms	