CoolEYE IR Image Sensors

For Temperature Sensing and Imaging

TPA 16.16C 5572 L4.7 Infrared Image Sensor

Target Applications

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

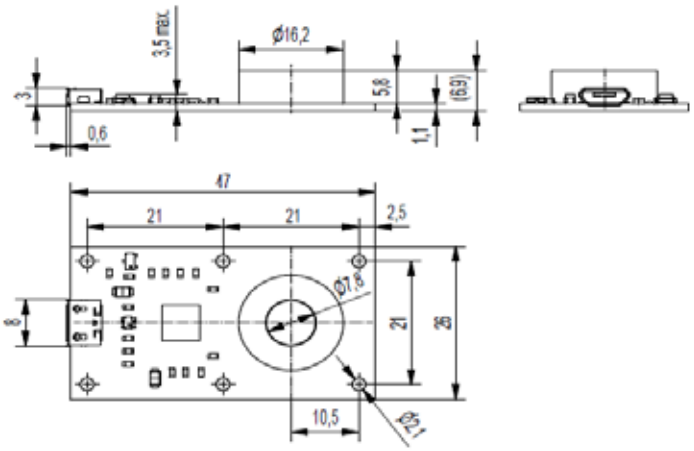
Features and Benefits

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

Product Description

This new CoolEYE Infrared Image Sensor offers spatial resolution of 256 pixels. With this it offers the benefits of fast response with relatively low-resolution infrared imaging.The new module includes a small IR transmissive lens and a new array sensor.

A small microprocessor on the module board provides a calibrated signal and acts as the bus interface. These supplied with micro USB connector.



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Parameter	Symbol	Min.		Max.	Unit	Conditions
Pixel configuration			16 x 16			
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	Tobj =25°C
Sensor Characteristics						
Sensititve Area	A		3,5 x 3,5		mm^2	
Signal Offset	Offs		32767		counts	T_{obj}=25°C/ $_{Tamb}$=25°C
Sensitivity	S_{40}		9		counts/°C	T_{obj}=40°C/ $_{Tamb}$=25°C
Sensitivity	S_{80}		14		counts/°C	T_{obj}=80°C/ $_{Tamb}$=25°C
Noise	N		12		counts	T_{obj}=25°C/ $_{Tamb}$=25°C
Ambient Temperature Sensor Characteristics						
Sensitivity			300		counts/°C	linear for T_{amb} 0...90°C
Count @ T_{amb} = 25°C			16000		counts	
Noise			20		counts	
Optical Characteristics						
Field of View	FoV		47 x 47		Degree	peak to peak
Optical Axis	OA	-10	0	+10	Degree	
Spectral range		5,5		14	µm	
Interface Characteristics						
USB 2.0						
Device Class			CDC			Communication Device Class
Frame rate			35		ms	