

# Almost Invisible Gas Sensor

Technology For My Life



## Advantages

- o **Small SMP Packaging (3 x 3 x 1 mm)** with ROIC
- o **Smallest Die: 0.6 x 0.6 x 0.3 mm**
- o Self-Temperature Compensation
- o Long-Term Stability
- o High Sensitivity
- o Fast Response Time
- o Affordable Price
- o **Low Power Consumption(<15mW)**

## Technical Details

Target Gas	VOCs, CO, EtOH, CH <sub>4</sub> , NO <sub>2</sub> , Toluene, H <sub>2</sub> S etc.
Sensitivity	Rair / Rgas, 20 ppm CO : 250 %, EtOH : 550 %, CH <sub>4</sub> : 200 %, NO <sub>2</sub> : 1100 %, Toluene : 550 %
Resolution	50 ppb of NO <sub>2</sub>
Response Time	10 sec
Operating Temp.	-10 ~ 70°C
Storage Temp.	-40 ~ 100°C
Related Humidity	10 ~ 90 %RH
Heater Voltage	1.0V
<b>Electric Power Consumption</b>	<b>&lt; 15mW</b>
<b>Dimension</b>	<b>0.6 x 0.6 x 0.3 mm</b>
SMP Packaging	3 x 3 x 1 mm
Output	I2C Digital Output
Supply Voltage	3.3 V

### Notice:

The contents of this manual are subject to change without prior notice.

## Applications

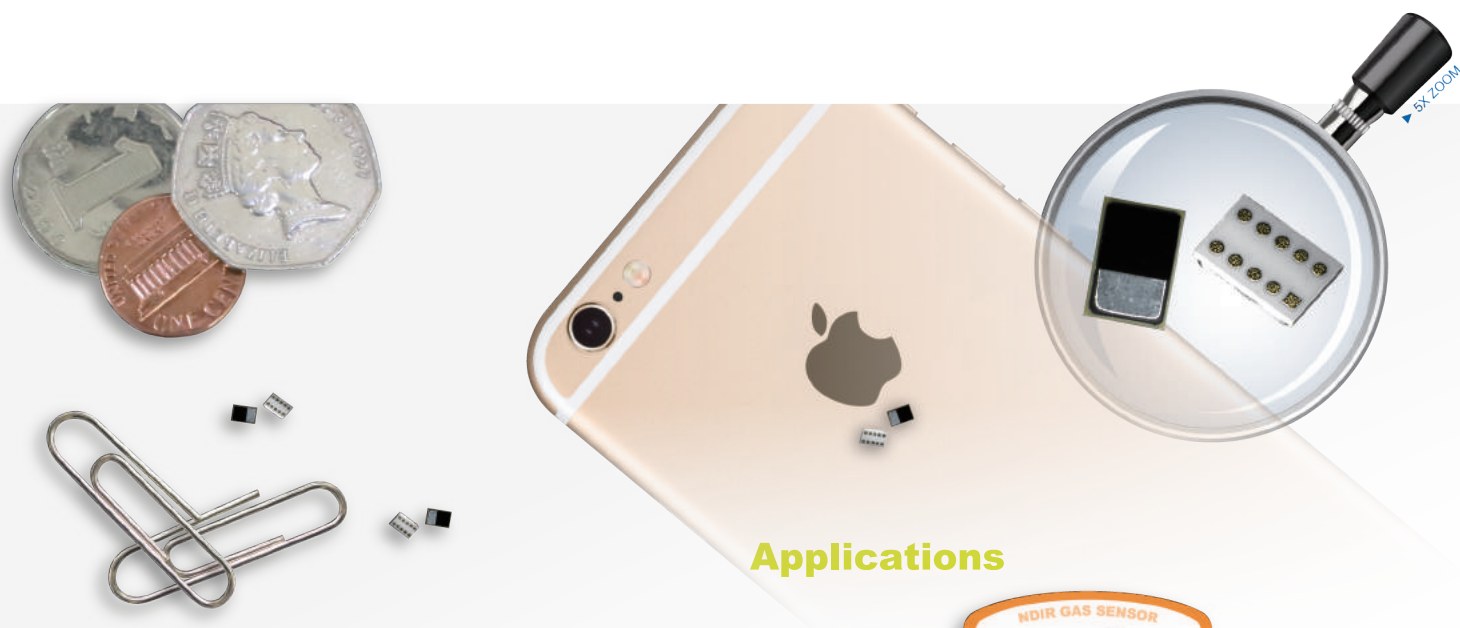


## Sales

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# Infrared Detector

Technology For My Life



## Applications

### Advantages

- o **Small SMP Packaging (2.3 x 3.4 x 1.2 mm)** with ROIC
- o **Smallest Die: 1.0 x 1.0 x 0.3 mm (or 1.6 x 1.6 x 0.3 mm)**
- o **Self-Temperature Compensation**
- o **Continuous Temperature Monitoring**
- o **High Reliability & Stability**
- o **Low Cost**
- o **Real-Time Motion Detection**

### Technical Details

Parameter	Symbol	AIR111	Unit
Sensitive Area	A	1*1	mm <sup>2</sup>
Number of Junctions	Nj	128	ea
Signal Voltage	Ov	12	mV (125°C, 7um Cutoff Filter)
Responsivity	Sv	100	V/W (227°C, 1Hz)
Time Constant	τ	25	ms
Noise Voltage	VRMS	0.02	μVHz <sup>1/2</sup>
Detectivity	D*	1.5*10 <sup>8</sup>	cmHz <sup>1/2</sup> /W
Operating Temp.		-40 ~ 100	°C
Related Humidity		5 ~ 95	%RH
Filter		Si	Wavelength : 8 ~ 12um
Field Of View	FoV	110	° (at 50% Intensity Points)
Output			I2C Digital Output
Supply Voltage		3.3	V

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- o Non-contact Infrared Thermometer (Ear Thermometer)
- o Security System (Real-time Motion Detection, Tracking Camera, Fence Surveillance)
- o Mobile Application (Smart Phone, Tablets, Watches)
- o Motion Sensor Light
- o Gas Sensor (NDIR)
- o Consumer Applications : Micro-wave Oven, Air Conditioner, Refrigerator and Printer etc.