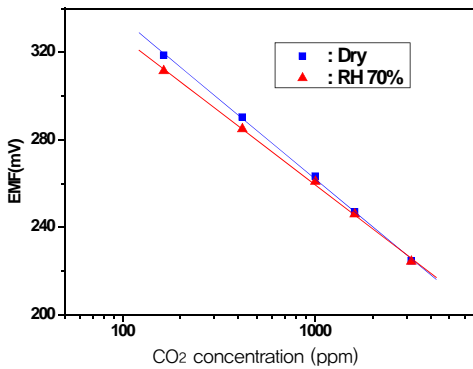
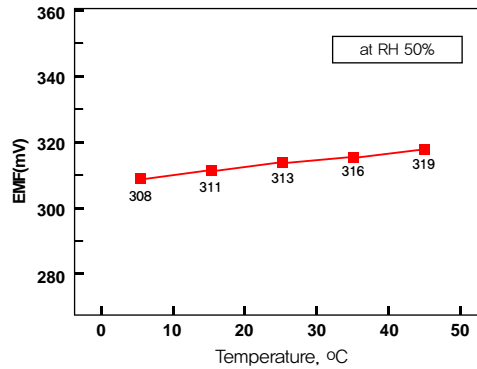


1. INTRODUCTION

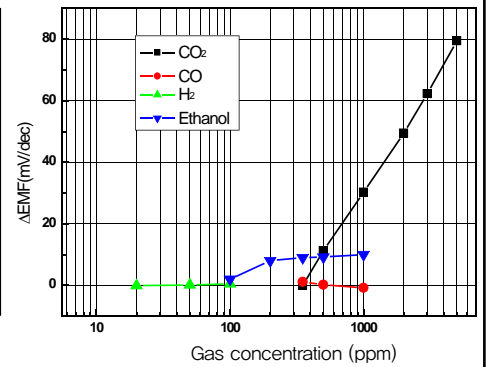
Humidity Dependency



Temperature Dependency



Sensing Characteristics



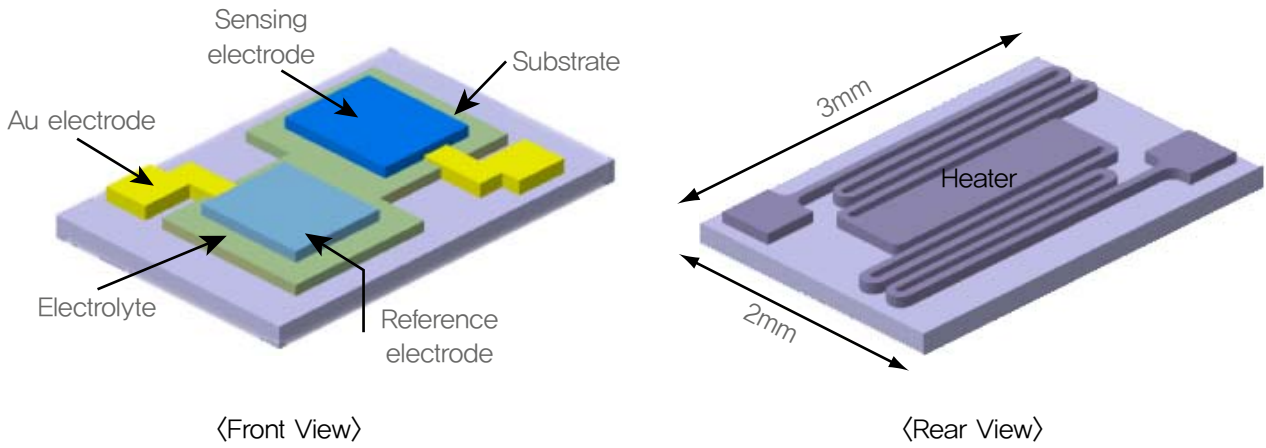
2-1 Equation for conversion EMF into CO₂ concentration

$$\text{Concentration} = 10^{\frac{E^0 - E}{K}}$$

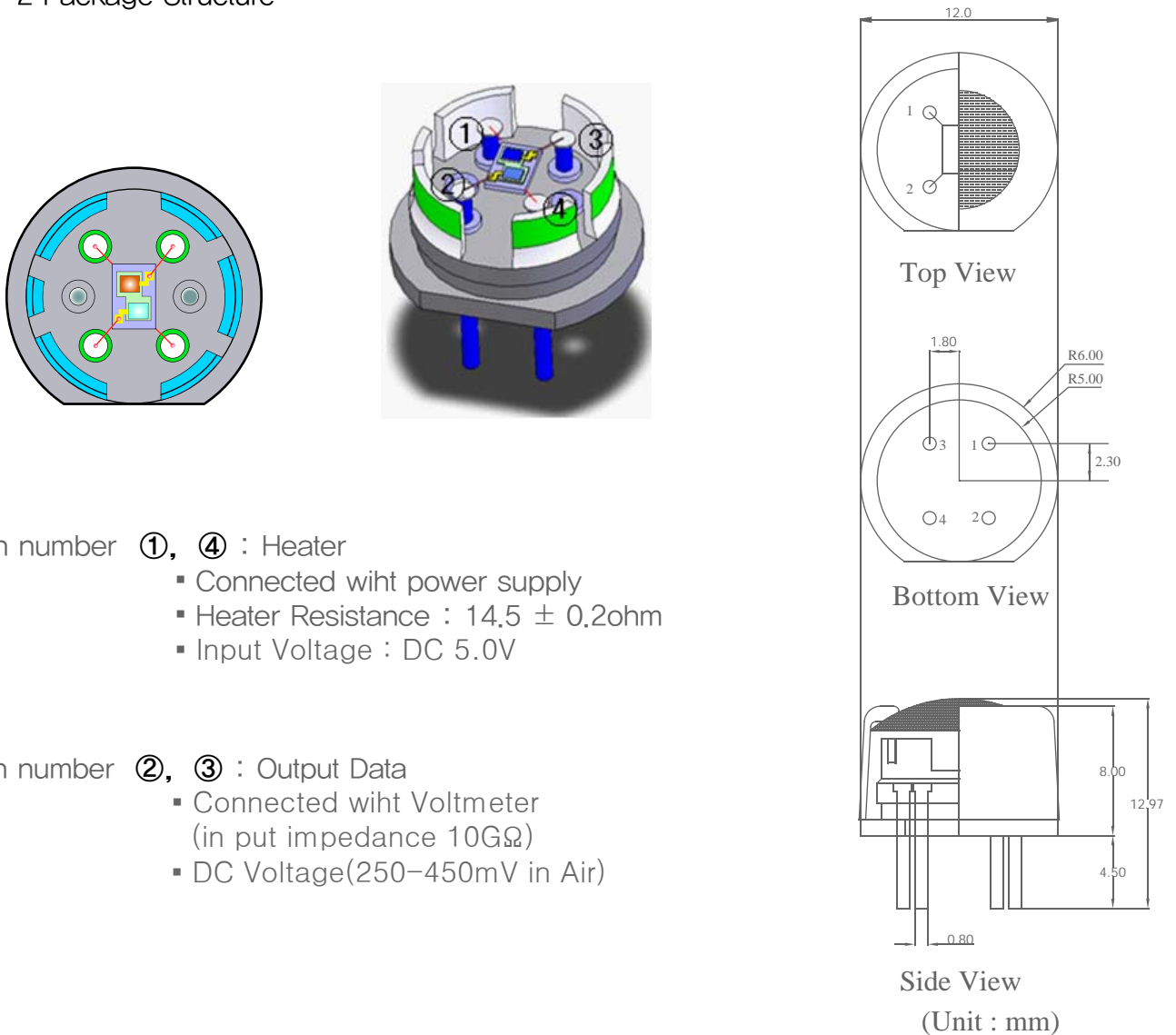
K : slop(58-65) , E⁰ : emf in 0 ppm CO₂ (470-570mV), E: emf in gas
 *emf : electro motive force

3. Structure and Dimensions

3-1 Sensor Structure



3-2 Package Structure



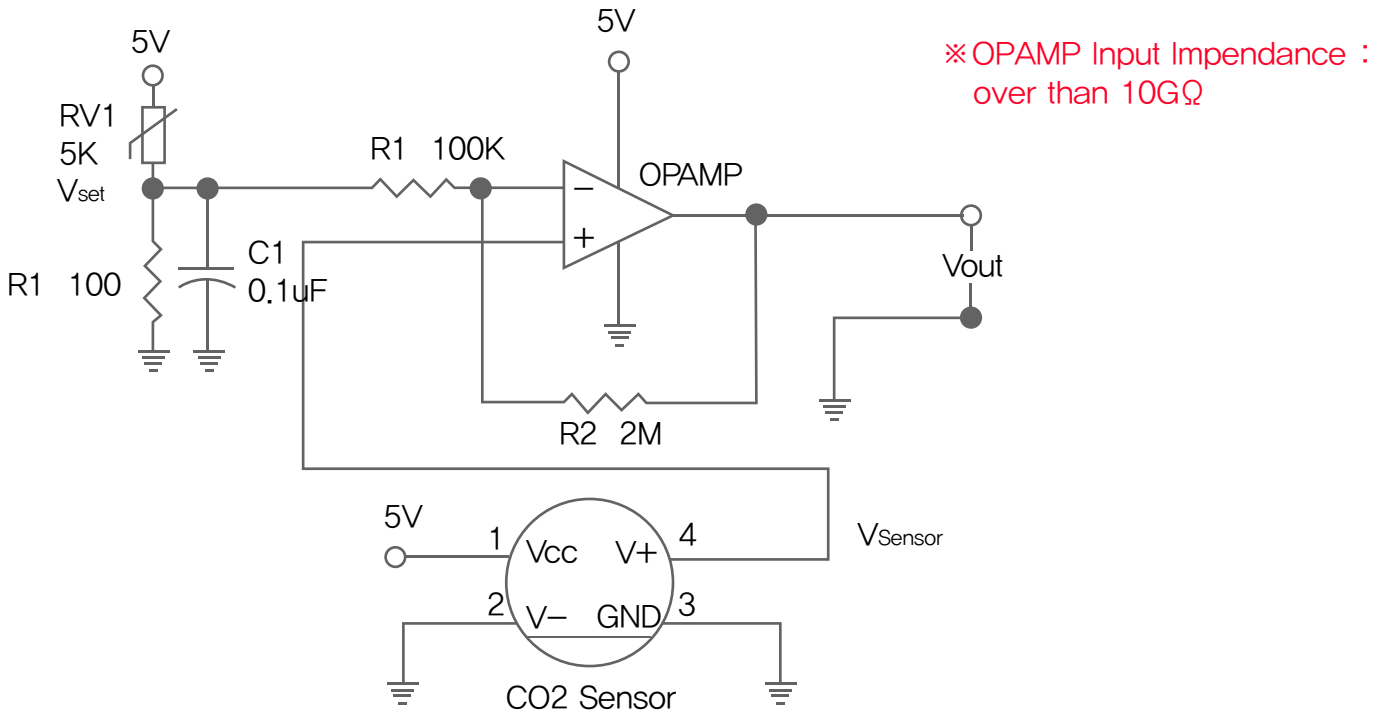
Pin number ①, ④ : Heater

- Connected with power supply
- Heater Resistance : $14.5 \pm 0.2\Omega$
- Input Voltage : DC 5.0V

Pin number ②, ③ : Output Data

- Connected with Voltmeter (input impedance $10G\Omega$)
- DC Voltage(250-450mV in Air)

4. Basic Measuring Circuit



5. Specifications(Sensor)

Model Number			
Target gas		Carbon Dioxide (CO2)	
Typical detection range		100 ~ 10000ppm	
Electrical Characteristics	Heater resistance	R_H	$13.5 \pm 0.5\Omega$
	Heater current	I_H	140 mA
	Power consumption	P_H	$710 \pm 20mW$
	Electro motive force	EMF	250 ~ 400mV (in 400ppm)
	Sensitivity	ΔEMF	60mV/dec ± 10 (160-3000ppm)
	Heater Voltage	V_H	DC 5V ± 0.1
	Response time		
	Measurement accuracy		$\pm 15\%$
Operating conditions		-10 ~ 50°C, 20 ~ 80% RH	
Standard Test Condition	Circuit condition	$V_H = 5.0 \pm 0.1V$ DC	
	Condition period before	2days	