



Customer: \_\_\_\_\_

# SPECIFICATION of CO2 MEASUREMENT UNIT

MODEL NO. : CO2-4K-3M-P

CUSTOMER'S APPROVAL		 <b>NIPPON CERAMIC CO., LTD.</b> 176-17 Hirooka, Tottori-shi, 689-1193 JAPAN TEL : +81-857-53-4666 FAX : +81-857-53-3532		
APPROVED BY	CHECKED BY	DRAWN BY		
MODEL NO. : CO2-4K-3M-P	DRAWING NO. : PRLNDI-002A	REV : 	PAGE 1 / 4	February, 19, 2014  <b>NIPPON CERAMIC CO., LTD.</b>
PART NO. :				

## 1. SCOPE

This specification describes a CO2 Measurement Unit supplied by Nippon Ceramic Co., Ltd.

## 2. TYPE of UNIT

2.1. TYPE NAME: CO2 Measurement Unit

2.2. MODEL NO.: CO2-4K-3M-P

## 3. DIMENSIONS

See Fig. 2.

Production Lot No. is put on a Unit.

## 4. GENERAL / ELECTRICAL CHARACTERISTICS


Table 1

PARAMETER	SPECIFICATION
4.1. Outputs	PWM Open Collector to GND      Maximum 5mA
4.2. Operating Temperature	0 ~ +40 degrees Celsius
4.3. Storage Temperature	-20 ~ +50 degrees Celsius
4.4. Operating Humidity	0-95% non-condensing
4.5. Supply Voltage	5+/-0.5 VDC
4.6. Current Consumption	25mA (Average) <100mA (Peak)
4.7. Connector (3-pin)	Pin_1 - V+ Pin_2 - V- Pin_3 - PWM Output
4.8. Connector Type	JST S3B-EH-A(LF)
4.9. Reverse Polarity Protection	None

## 5. CO2 MEASUREMENT

Table 2

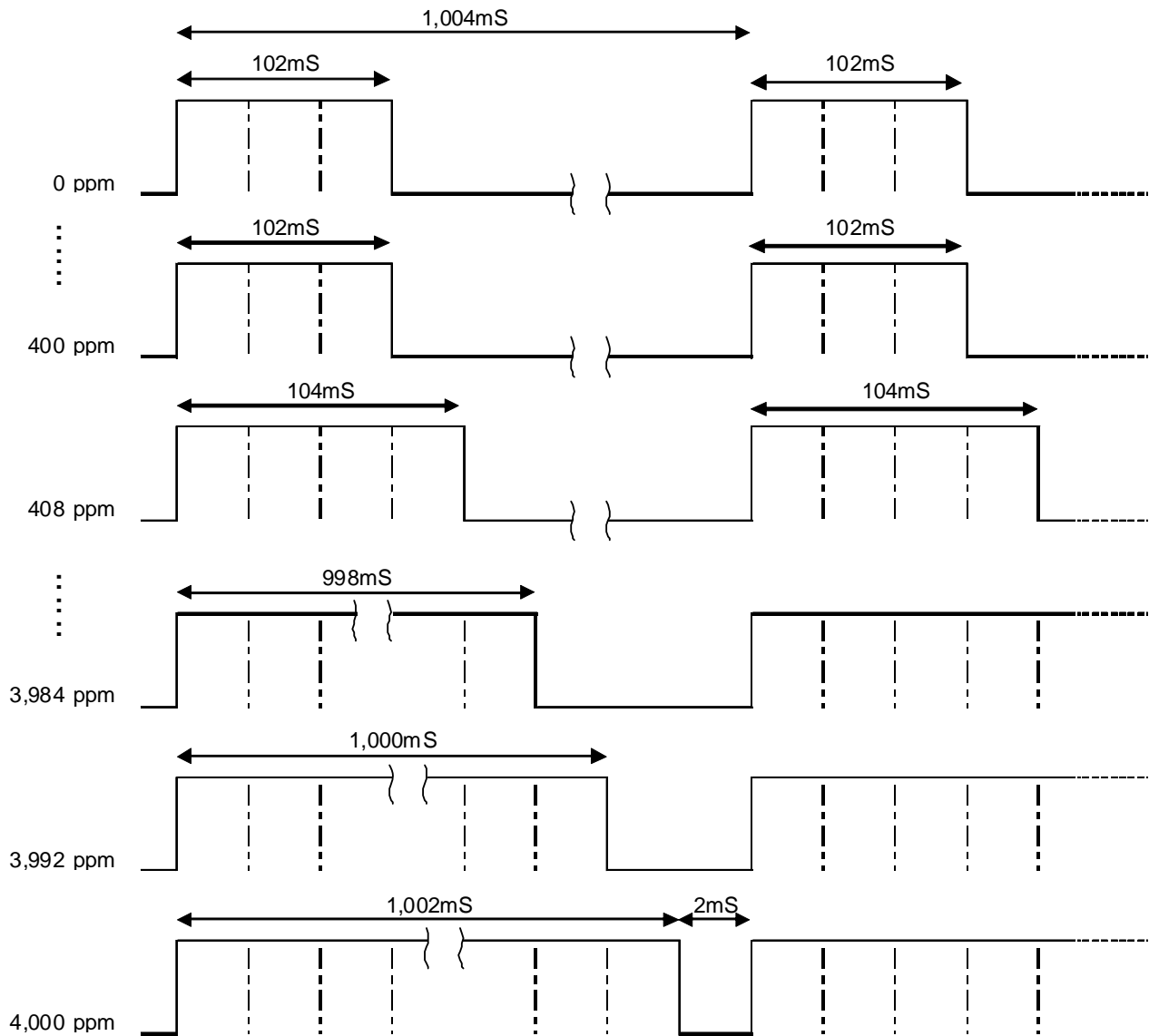
PARAMETER	SPECIFICATION
5.1. Type of Measurement	NDIR
5.2. Measurement Range	400 – 4,000ppm CO2 by volume
5.3. Resolution	< 20ppm CO2
5.4. Accuracy	+/-5% FS (+/-200ppm) at 25°C
5.5. Pressure Dependence	0.13% of reading per mm Hg
5.6. Response Time	< 3 minutes for a 90% step change
5.7. Warm Up Time	< 30 seconds operational <15 minutes full accuracy


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**6. PWM Output Cycle**

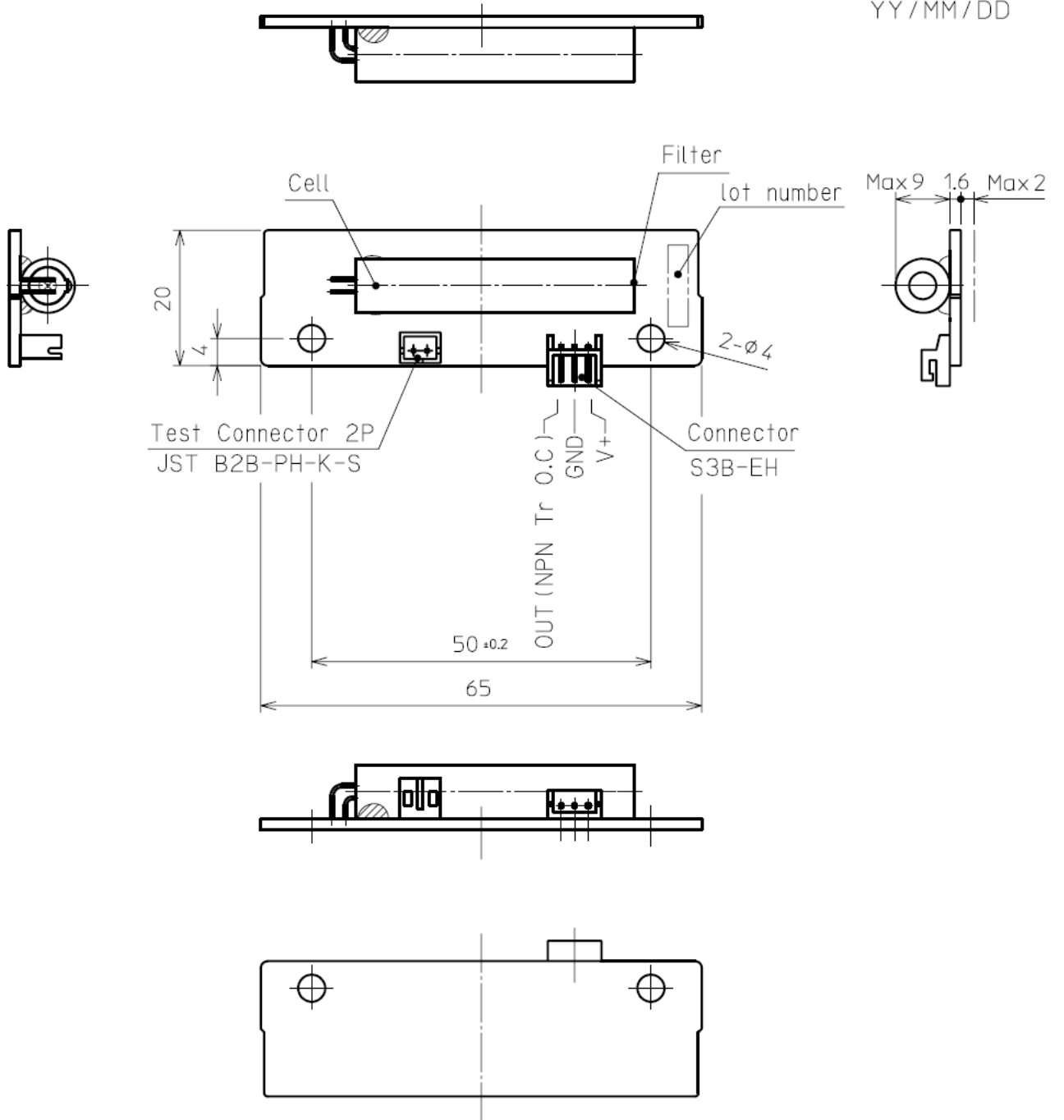
Table 2

PARAMETER	SPECIFICATION
6.1. Cycle Period	1004 ms +/- 5%
6.2. Cycle Start High Level	2ms (nominal)
6.3. Cycle End Low Level	2ms (nominal)


**Figure 1: PWM Output Cycle**

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lot number  
YY/MM/DD



Unit [mm]

Figure 2: Dimensions

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