

Product Data Sheet

NDIR CO2 SENSOR MODULE IRM300 (P/N: A96-0000-000)

• Description

IRM300 is a general infrared CO2 sensor module formed using the NDIR infrared absorption detection principle.

• Performance Characteristics

Output Mode:	UART, PWM, IIC Analog (0 ~ 4 V)
No. of Channel:	Dual
Dimension:	57 mm x 35 mm x 16 mm
Application:	HVAC, Air Quality, Instruments And Apparatuses

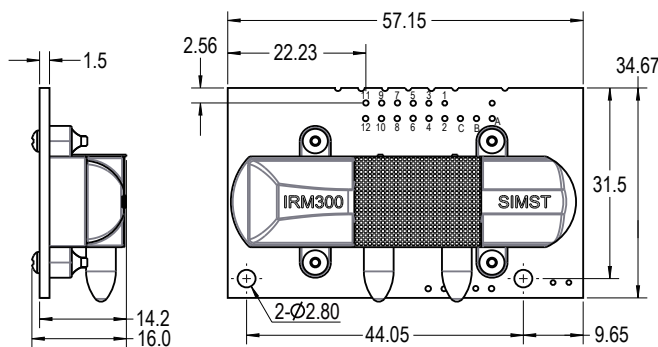
• Environmental

Storage Temperature:	-40°C ~ 70°C
Working Temperature:	0°C ~ 50°C
Working Humidity:	0% ~ 95%RH non-condensing

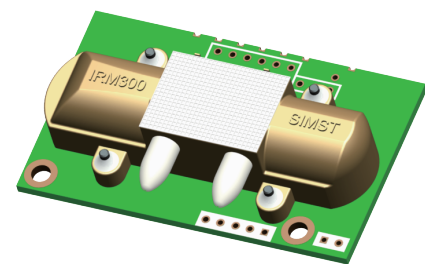
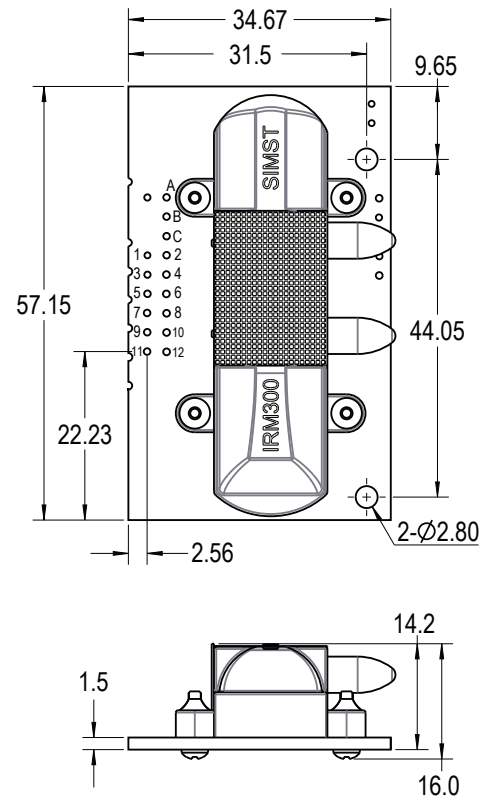
• Interface

Pin A - TX (UART)	Pin 1 - VCC
Pin B - RX (UART)	Pin 2 - GND
Pin C - VCC	Pin 3 - GND

• Installation Instructions



• Product Dimensions



All dimensions in mm
All tolerances ± 0.20 mm unless otherwise stated

• Note

All the above performance parameters are measured in a standard test environment. Please contact us if you need more details.

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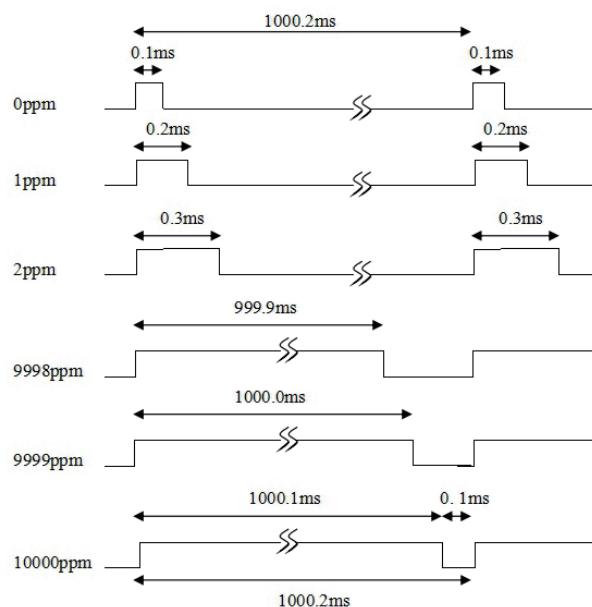
• Technical Data

Description	Parameter	Unit
Detection Range	0 ~ 50,000 (customizable)	ppm
Detection Accuracy	±50 ppm ± 5% reading (customizable)	/
Response Time (T90)	diffusing: 60	seconds
	pumping: 10	seconds
Warm-Up Time	T _{warm} : 120	seconds
Working Voltage	5 ± 0.5	V
Working Current	I _{max} : 130	mA

• PWM Output

Cycle: 1,000.2ms ± 5%

$$C_{ppm} = 10,000ppm \times (TH - 0.1ms) / (TH + TL - 0.2ms)$$



• UART Protocol

Baud Rate: 19,200 bps, 8 data bits, 1 stop bit, no check bit. The concentration readout and return data are in hexadecimal.

Concentration uploaded automatically in ASCII with the format:

32	32	x	x	x	x	x	32	p	p	m	\r	\n
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For example: output of 12,345 ppm:

		1	2	3	4	5		p	p	m	\r	\n
0x20,	0x20,	0x31,	0x32,	0x33,	0x34,	0x35,	0x20,	0x70,	0x70,	0x6d,	0x0d,	0x0a,