

• Description

IRM300SS is a general infrared CO2 sensor module formed using the NDIR infrared absorption detection principle.

• Performance Characteristics

Output Mode:	UART, PWM
No. of Channel:	Single
Dimension:	57 mm x 26 mm x 16 mm
Application:	Fresh Air System, Air Quality

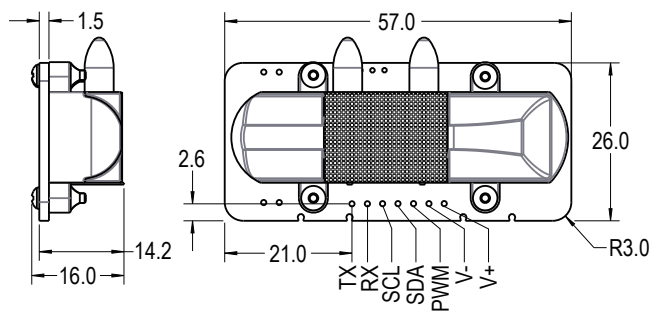
• Environmental

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

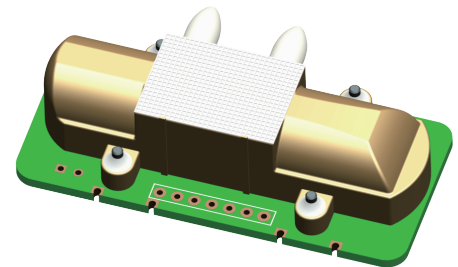
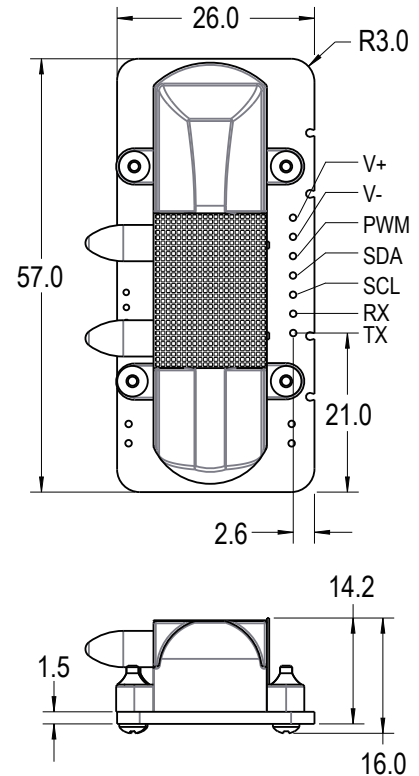
• Interface

Pin 1 - VCC	Pin 6 - RX (UART)
Pin 2 - GND	Pin 7 - TX (UART)
Pin 3 - PWM Output	Pin 8 - 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.

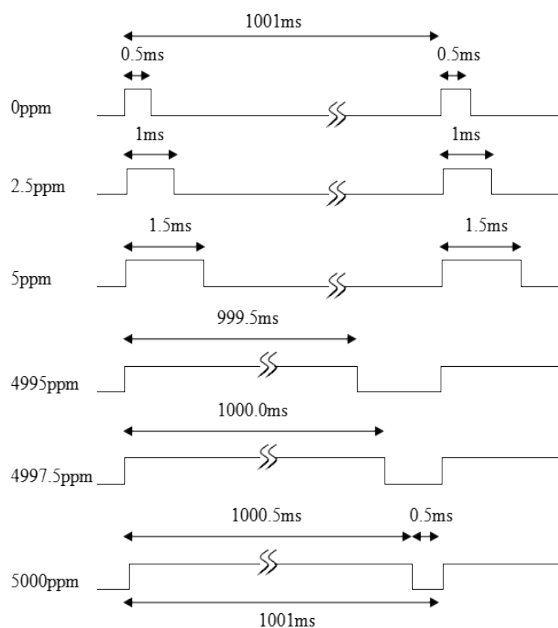
• Technical Data

Description	Parameter	Unit
Detection Range	0 ~ 5,000 (customizable)	ppm
Detection Accuracy	$\pm 50 \text{ ppm} \pm 5\% \text{ reading}$ (customizable)	/
Response Time (T90)	diffusing: 60	minutes
	pumping: 10	seconds
Warm-Up Time	T _{warm} : 120	minutes
Working Voltage	5 ± 0.5	V
Working Current	I _{max} : 75	mA

• PWM Output

Cycle: 1,001ms $\pm 5\%$

C_{ppm} = 5,000ppm x (TH - 0.5ms) / (TH + TL - 1ms)



• 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
----	----	---	---	---	---	---	----	---	---	---	----	----

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,