GP2Y1040AU0F

Application

Air quality Monitoring /IoT sensor devices

Property

Small size/ High accuracy(±10%) / UART and I2C interface.

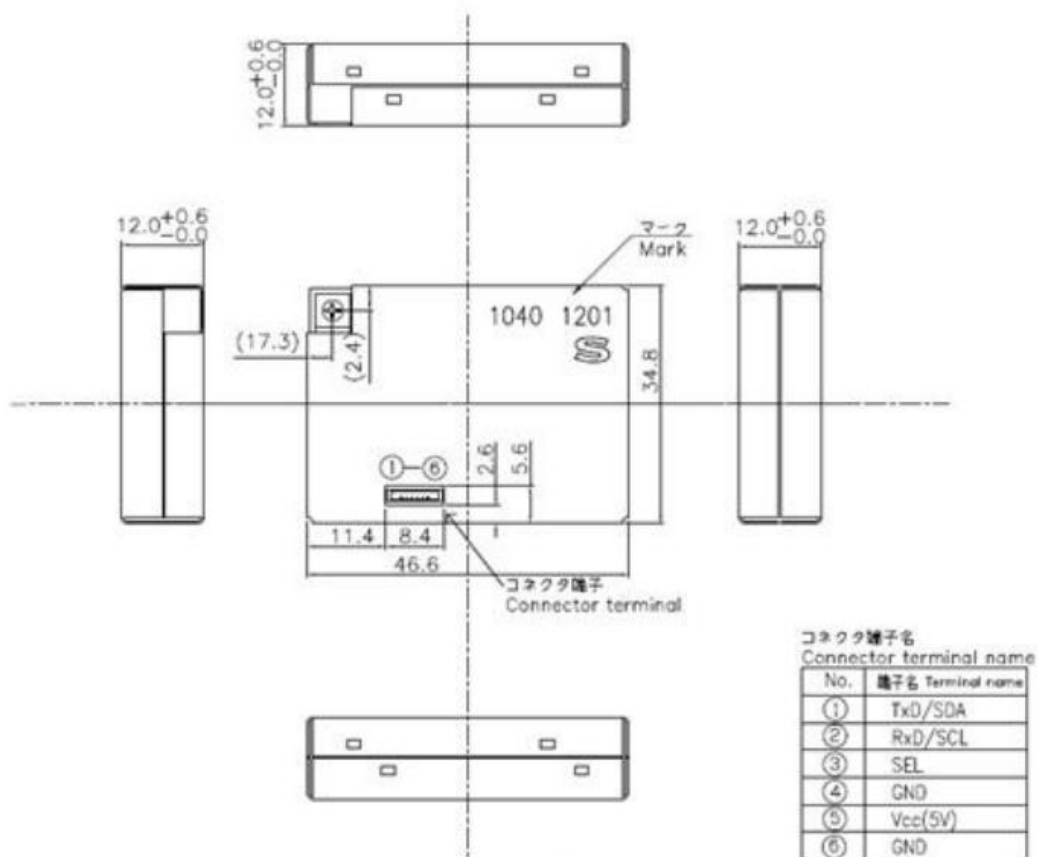### Introduction

GP2Y1040AU0F is a new laser particle counting sensor with built-in fan. The laser type is VCSEL. This air quality sensor outputs particle counts in the form of number concentrations for different particle sizes as well as the corresponding PM1, PM2.5, and PM10 mass concentration values in units of µg/m3
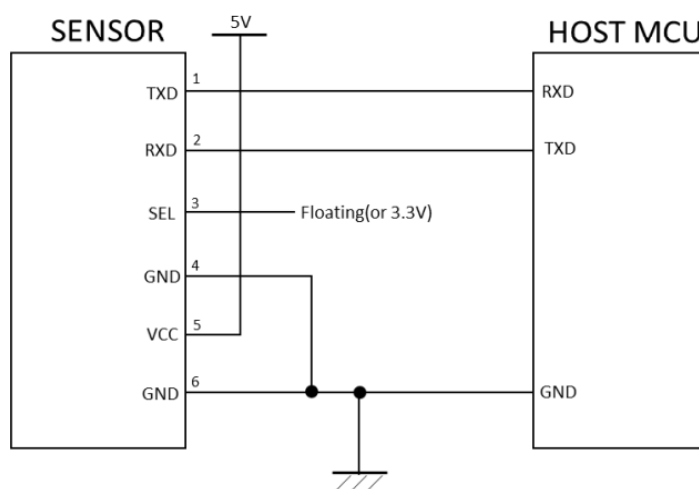
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Specifications (T=25℃)

Items	Symbols	
Supply Voltage	Vo	-0.3~6V
Operating Voltage	Vo	5V
Active Current	Icc	50mA
Sleep Current	I_sleep	$35\,\mu$A
Operating Temperature	To	-10℃ ~ +60℃
Storage Temperature	Ts	-20℃ ~ +80℃
Input high level voltage	V_IH	>2.31V
Input low level voltage	V_IL	<0.99V
Output high level voltage	V_OH	>2.7V
Output low level voltage	V_OL	<0.4V
Response time		<8s
Sampling interval		1s
Particle size range		$0.3\,-\,10.0\,\mu$m

Outline Dimensions

Connector terminal name

No.	Terminal name
①	TxD/SDA
②	RxD/SCL
③	SEL
④	GND
⑤	Vcc(5V)
⑥	GND

Connection Circuit

SENSOR		HOST MCU
TXD	1	RXD
RXD	2	TXD
SEL	3	Floating(or 3.3V)
GND	4	
VCC	5	
GND	6	GND

Note: To select the UART interface, please set the SEL terminal (pin3) to floating (or 3.3V). If the RXD terminal of the sensor is not used, leave the RXD terminal (pin 2) floating.

No.	PIN Name	Description	Remarks
1	TXD	UART : Transmitting Pin	3.3V Logic
	SDA	I2C : Serial data	
2	RXD	UART : Receiving Pin	3.3V Logic
	SCL	I2C : Serial clock	
3	SEL	Interface select	UART: Floating or 3.3V, I2C: Low level (=GND)
4	GND	Ground	—
5	Vcc	Supply Voltage	5V±10%
6	GND	Ground	—