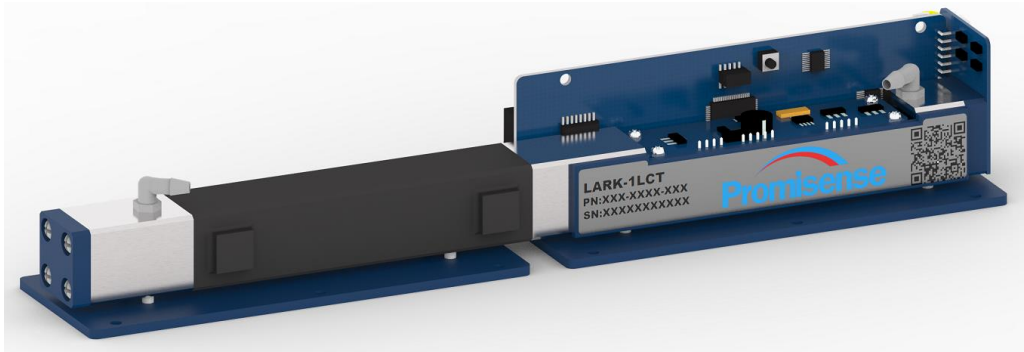


NDIR CO₂ SENSOR MODULE

DATASHEET

LARK-1LCT CO₂ 100PPM | Order No.: 001-0801-G00



Parameters

Principle	NDIR
Range	0 ~ 100 ppm CO ₂
Sampling Mode	Pumping
Response Time	≤ 10 s (@500 mL/min)
Recovery Time	≤ 10 s (@500 mL/min)
Long-term Stability*	≤ ±13 ppm/month
Temperature	0 °C ~ 40 °C
Tolerance	±4 ppm @20 °C
Zero Temp. Drift	±50 ppm (Full Temperature)
Resolution	0.8 ppm/sec
Reading Unit	ppb
Detection Limit	0.8 ppm

*Long-term Stability: 28 days of zero drift measured in clean air of 0~90% RH, 0~35 °C

Applications

- Pressure vessel leak detection
- TVOC online monitoring
- TOC in water online monitoring

Merits

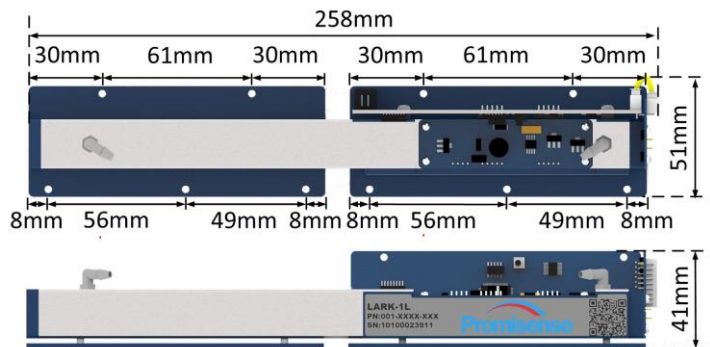
- High Resolution
- Low Detection Limit
- Optical Heating

Dimensions

- Length: 258 mm ± 1 mm
- Width: 51 mm ± 1 mm
- Height: 39 mm ± 1 mm
- Weight: 540 g ± 5 g
- Screw Hole Diameter: 3 mm

Mechanics

Optic Path	Steel (Gilt internal)
Circuit Board	FR4 / Lead-free HASL
Solder	Sn / Ag / Cu
Mounting Plate	ABS



DATASHEET

Electronics

Input Voltage	9 ~ 24 VDC (#9 pin)
Operating Current	< 0.15 A @9 VDC
Power	< 1 W Average < 1.5 W @ Peak
Heating PTC	Voltage 5VDC Power < 8W
Warm-up Time	3 minutes (Tolerance ± 50 ppm) 60 minutes (Tolerance ± 3 ppm)
Output Voltage	0.4 ~ 2.0 VDC (#2 pin) (0.3 ~ 0.4 V for Negative Reading)
Warranty	18 months*

Application Condition

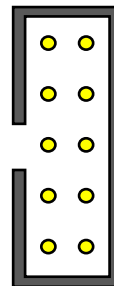
Prefer Condition	Room Temperature, Dry, Clean
Safety	None Explosion-proof Design
Temperature	0 °C ~ 40 °C
Humidity	0% RH ~ 85% RH (No Condensation)
Flow Rate	300 ~ 800 mL/min
Pressure	0.5 ~ 2.0 ATM (Ambient air pressure measured, without pressure compensation)

*Non-warranty Case:

- Polluted by condensation, water or dust; Dust and water removing is strongly suggested;
- Damaged by falling, hitting, disassembling, etching or over-loading;
- Label has been torn.

We reserves the right to modify this datasheet and will optimize the product in the future. If you use this product for specific application, please contact us for more technical support.

Connector Definition



1.ALM	2.V _{out} (DAC)
3.RXD(TTL)	4.TXD(TTL)
5.RXD(RS232)	6.TXD(RS232)
7.CS1*	8.GND
9.PWR DC	10.GND



*CS1: 0-3.3 VDC Output, for RS485

Accessory

Tygon Tube

- Length 50 mm × 2
- Diameter 3.2 mm × 6.4 mm
- Polyethylene, Transparent

Ribbon Cable

- Length 200 mm × 1
- 10-pin, 28 AWG, Gray
- Female Connector, 2 × 5
- 2.54 mm Pitch