DATA SHEET

CO$_2$ Sensors
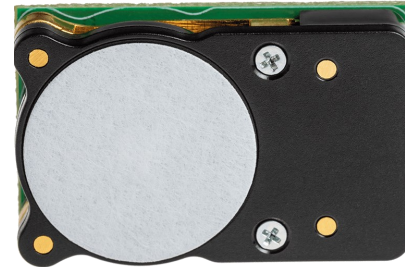## *Robust Range—CozIR®-Blink*

SST
DESIGN • MANUFACTURE • CUSTOMISE • CONFIGURE

📝 FEATURES

- Very low power / energy consumption - <25mJ
- Measures up to 1% CO$_2$ concentration
- Miniature format; vibration and shock resistant
- Solid-state; no moving parts, no heated filaments
- Digital UART & I²C output
- > 15 years lifetime

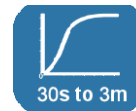| Supply Voltage	Power Consumption	Operating Temp	Output Digital	Response Time
3.3 V VOLTAGE	Max 33mW POWER	0°C to +50°C TEMPERATURE	TTL	30s to 3m

📁 BENEFITS

- Zero current consumption between measurements
- Ideal for low power and battery applications
- Ultra low power—can be configured by the user
- Low maintenance
- Suitable for wireless, portable, wearable and self-powered systems

Temperature		
Operating:	0°C to +50°C (standard)	
Storage:	-30°C to +70°C	
Humidity[b]	0—95% Rh, non-condensing	
Time to valid measurement[c]	<3.5s to measurement (standard settings)	
Connector	4 x 0.5mm sq pins	

🔧 TECHNICAL SPECIFICATIONS

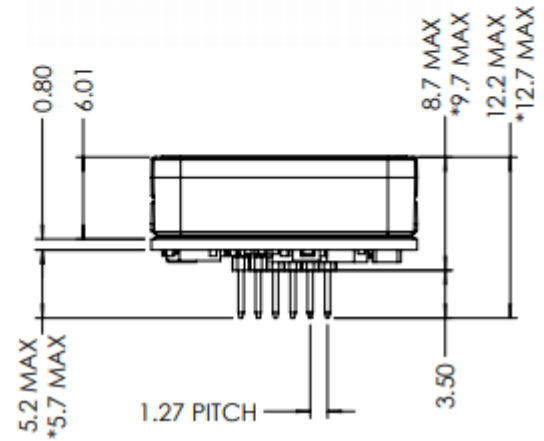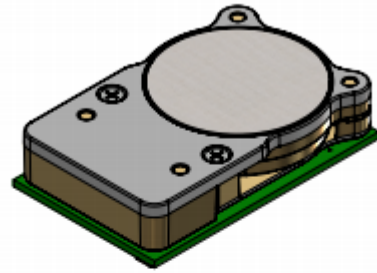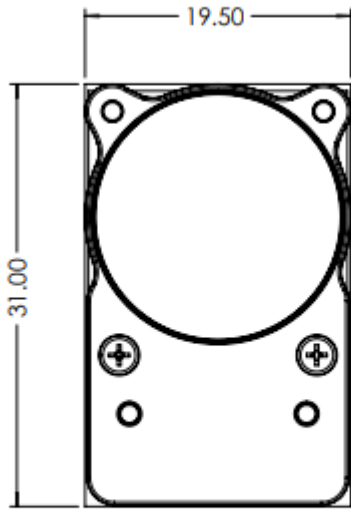|	
Supply voltage	3.25—5.5V$_{DC}$ (3.3V recommended) At standard setting, <25mJ per measurement
Current[a]	Peak Current 33mA Average Current <1.5mA
Power consumption[a]	User driven dependent on samples per measurement and time between measurements. Sensor in power cycled mode consumes no power between measurements
Output type	3.3V TTL level UART

📈 CO$_2$ MEASUREMENT SPECIFICATIONS

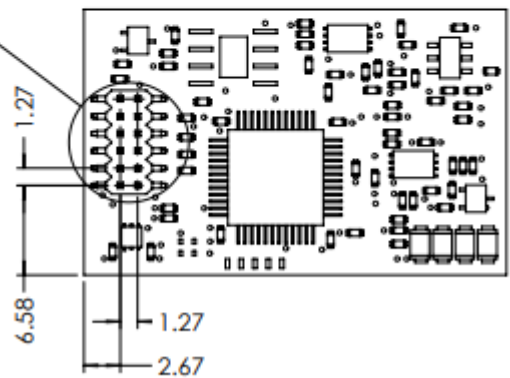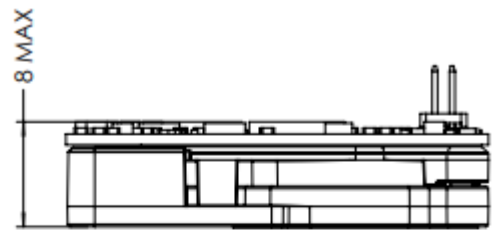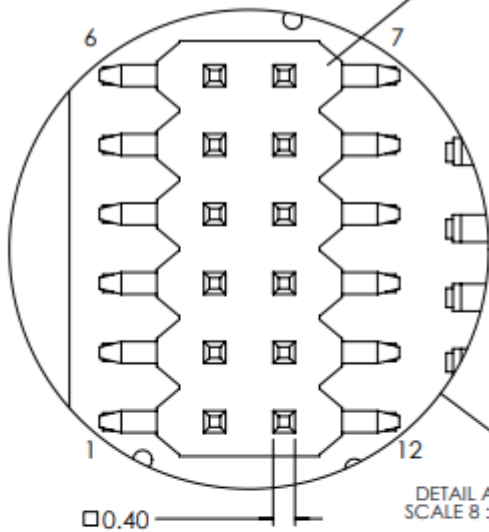|	
Sensing method	Non-dispersive infrared (NDIR) absorption
Sample method	Diffusion
Measurement range	0 - 2000ppm, 0 - 5000ppm, 0-1%
Accuracy[d]	± (45ppm+3% of reading)
Calibration	Autocalibration
Pressure dependence[e]	0.15% of reading per mbar in normal atmospheric conditions
Operating pressure range[f]	500mbar to 10bar
Response time (to a step Change in gas level)[g]	30 secs to 3 mins

Need help? Ask the expert
Tel: + 44 (0)1236 459 020
and ask for "Technical"

✔ NOTES

a) Power measurements for standard CO$_2$ sensor with 16 readings per measurement.
b) For extended operation in high temperature and humidity environments, contact SST.
c) Time to a valid reading is determined by the number of readings taken by the sensor. This can be varied from 1 to 32 by the user. The factory default is 16. Details of this can be found in the User Manual.
d) All measurements are at NTP unless otherwise stated.
e) Calibrated for 1013mbar. External pressure calibration required but our sensors have been tested up to 40 bar.
f) SST can supply advanced pressure correction advice when operating outside normal atmospheric conditions.
g) Response time to a step change in gas level is dependent on application/filter/flow rate/diffusion.

19.50

31.00

GCT BD095-12A-K0-0350-0050-0550
CONNECTOR

6
7

1
12

□0.40

DETAIL A
SCALE 8 : 1

0.80
6.01

8.7 MAX
*9.7 MAX
12.2 MAX
*12.7 MAX

5.2 MAX
*5.7 MAX

1.27 PITCH

3.50

8 MAX

1.27

6.58

1.27

2.67

Function	Pin	Pin	Function
READY	6	7	
NC	5	8	GPIO FUNCTIONS TBD
Tx OUT	4	9	
Rx IN	3	10	
V+	2	11	12C - SCL
GND	1	12	12C - SDA

ORDER INFORMATION

Generate your specific part number using the convention shown opposite. Use only the numbers that correspond to the sensor option you require — omit those you do not.

C O Z I R - B L I N K - 5 0 0 0 - X X X

Evaluation Kit
KIT*

NOTE: *Kit includes USB & Evaluation Software

CAUTION
Do not exceed maximum ratings and ensure sensor(s) are operated in accordance with their requirements.
Carefully follow all wiring instructions. Incorrect wiring can cause permanent damage to the device.
Do NOT use chemical cleaning agents.
Failure to comply with these instructions may result in product damage.

INFORMATION
As customer applications are outside of SST Sensing Ltd.'s control, the information provided is given without legal responsibility. Customers should test under their own conditions to ensure that the equipment is suitable for their intended application.

For technical assistance or advice, please email:
technical@sstsensing.com

General Note: SST Sensing Ltd. reserves the right to make changes to product specifications without notice or liability.
All information is subject to SST Sensing Ltd.'s own data and considered accurate at time of going to print.

RoHS

REACH COMPLIANCE