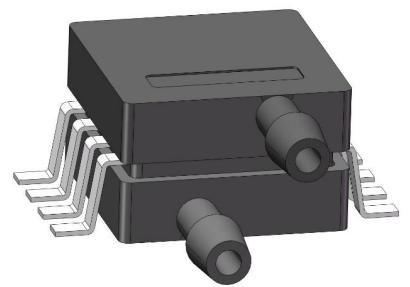




BANNING
PRESSURE SENSOR
BLWLP7xxxXDC3



BANNING

DESCRIPTION

BLWLP7xxxXD series integrated low pressure and high precision pressure sensor, the high performance MEMS pressure sensitive chip and special conditioning chip are packaged in the structure of dual gas nozzle SOP14, the two gas path structure of the pressure reference each other, reduce the impact of environment on the output.

BLWLP7xxxXD adopts unique algorithm to realize multi-order temperature compensation for the sensor, and output in the form of digital IIC. Gauge pressure or differential pressure intake products are available.

CHARACTERISTICS

- Pressure type: Gauge pressure, Differential pressure
- Measuring range: -10~10 cmH₂O , -20~20 cmH₂O , -40~40 cmH₂O , -100~100 cmH₂O,etc
- Output form: I²C digital output, communication mode see programming guidance
- High accuracy
- Calibrated compensation

PERFORMANCE

Parameter	Minimum	Typical	Maximum	Unit	Note
Supply voltage	3.0	3.3 or 5.0	5.25	V	
Working current		4.5		mA	
Digital output minimum		-26214		Counts	
Digital output maximum		26214		Counts	
Temperature of compensation	-10		+ 65		
Operating temperature	-20		85		
Storage temperature	-40		125		
Accuracy of accuracy			± 2.5	%FS	

- Unless otherwise specified, all values in this table are tested at a voltage of 5.0V DC and a temperature of 25
- Accuracy refers to the output accuracy of the product within the compensation temperature range and under clean gas environment.
- The accuracy is determined by linearity, repeatability and hysteresis of the product.

APPLICATION

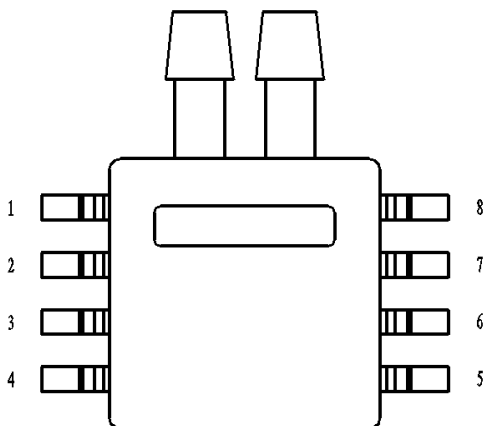
- Industrial control
- Medical monitoring
- Household appliances
- Fitness equipment
- Automotive Applications

RANGE PARAMETER

Model	Working pressure	Tolerance to pressure	Burst pressure
BLWLP7001GDC3	0~10 cmH ₂ O	± 300 cmH ₂ O	± 400 cmH ₂ O
BLWLP7002GDC3	0~20 cmH ₂ O	± 300 cmH ₂ O	± 400 cmH ₂ O
BLWLP7004GDC3	0~40 cmH ₂ O	± 300 cmH ₂ O	± 400 cmH ₂ O
BLWLP7010GDC3	0~100 cmH ₂ O	± 300 cmH ₂ O	± 400 cmH ₂ O
BLWLP7001DDC3	- 10~10 cmH ₂ O	± 300 cmH ₂ O	± 400 cmH ₂ O
BLWLP7002DDC3	- 20~20 cmH ₂ O	± 300 cmH ₂ O	± 400 cmH ₂ O
BLWLP7004DDC3	- 40~40 cmH ₂ O	± 300 cmH ₂ O	± 400 cmH ₂ O
BLWLP7010DDC3	- 100~100 cmH ₂ O	± 300 cmH ₂ O	± 400 cmH ₂ O

- Sample test
- The tolerance pressure refers to the maximum pressure under which the sensor can still work after the pressure is restored to the working pressure range after the device exerts such pressure for a short time
- Burst pressure refers to the pressure applied to the sensor beyond this range, which will cause permanent damage to the sensor.

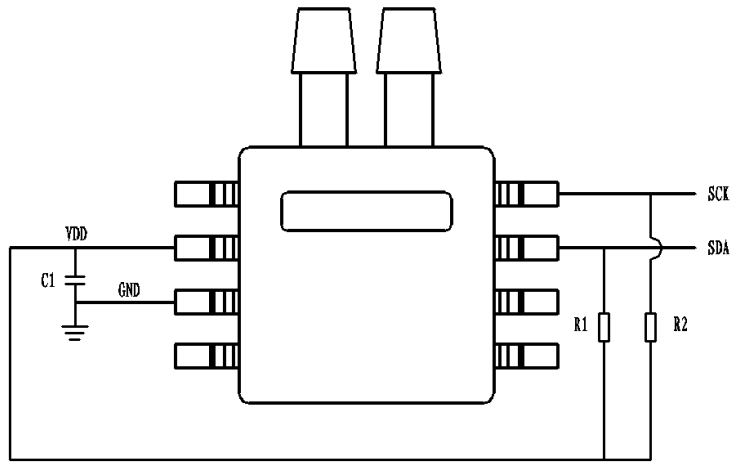
PIN DEFINITION



Pin number	Pin definition	Instructions
3	GND	ground
2	VDD	Positive power supply
7	SDA	data
8	SCK	time
1	Vout	Analog output
4,5,6	NC	-

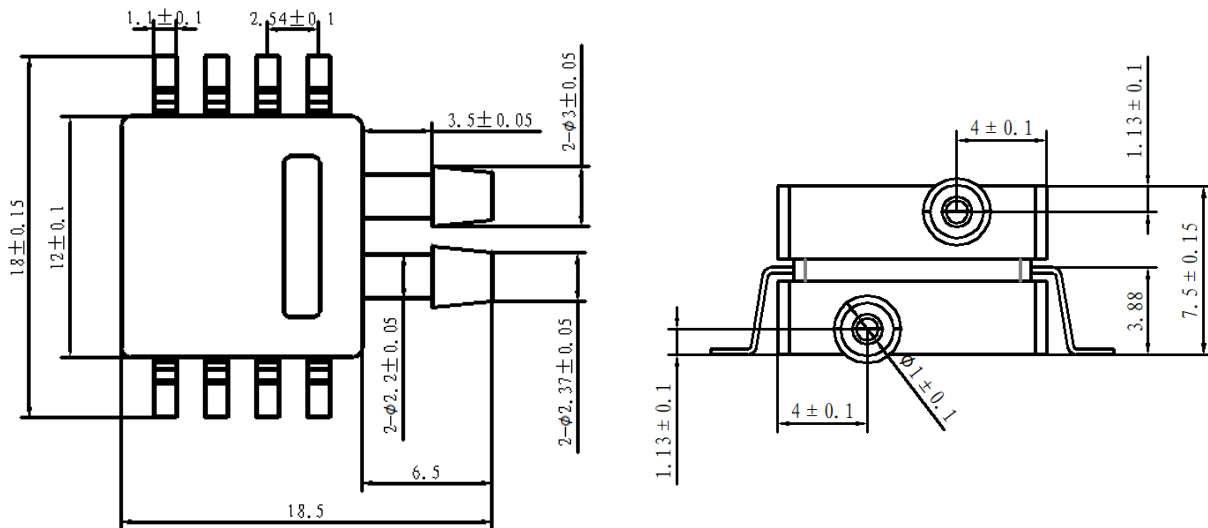
FUNCTION DESCRIPTION

Recommended circuit



- (1) If the filtering capacitor C1 is considered between VDD and GND, the capacitor value is 100nf.
- (2) I²C pull-up resistors R1 and R2, the recommended resistance value is 4.7k .

DIMENSIONS (mm)



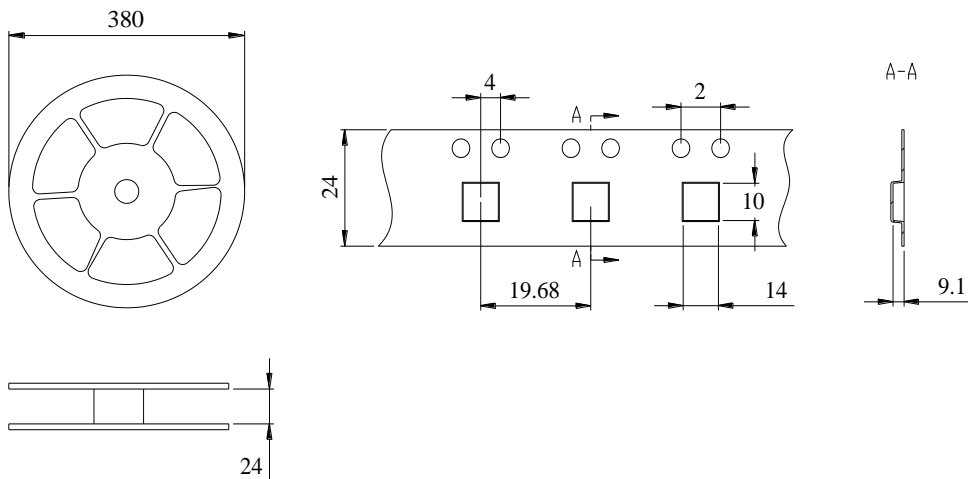
- (1) The unit of all dimensions is mm, the tolerance position is not marked, the dimensional tolerance is ± 0.05 mm
- (2) B is the air pipe connected to the bottom of the sensor, and T is the air pipe connected to the top of the sensor. The top trachea T is defined as a high pressure interface.

ORDER

Model	Working pressure	Method of packing	Minimum packing quantity
BLWLP7001GDC3	0~10 cmH ₂ O	volume	450pcs/volume
BLWLP7002GDC3	0~20 cmH ₂ O		
BLWLP7004GDC3	0~40 cmH ₂ O		
BLWLP7010GDC3	0~100 cmH ₂ O		
BLWLP7001DDC3	- 10~10 cmH ₂ O		
BLWLP7002DDC3	- 20~20 cmH ₂ O		
BLWLP7004DDC3	- 40~40 cmH ₂ O		
BLWLP7010DDC3	- 100~100 cmH ₂ O		

METHOD OF PACKING

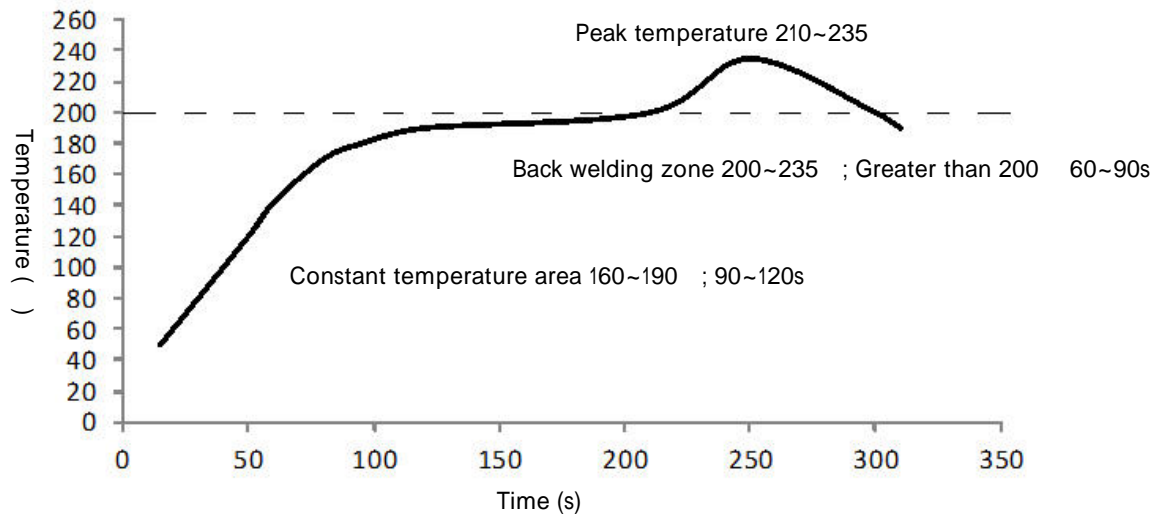
BLWLP7xxxV adopts roll and tape packing method, the minimum packing quantity is 450pcs.



PRECAUTIONS FOR USE

Requirements for reflow welding

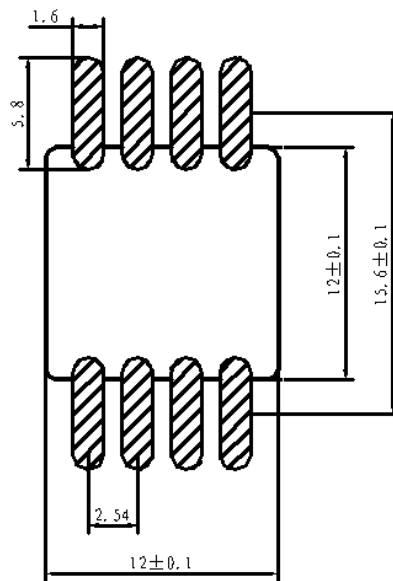
The maximum welding temperature of BLWLP7xxxV series is not higher than 235 , which can be set by referring to Figure 1.



Gas path requirements

It is recommended to use silicone hose as the air inlet pipe for BLWLP7xxxXD series products. Rigid PVC pipes are not recommended.

Patch pad size (mm)



DISCLAIMER

Warning

LIFE OR PROPERTY RISK

- Please ensure that this product has been designed as part of whole system and already considered related risks, make sure the product has the correct ratings and is designed based on the entire system. It must not be used when applications related to serious life or property damage risks.

Failure to follow this instruction can result in death or serious injury.

Warning

PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to follow this instruction can result in death or serious injury.

Warning

MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to follow this instruction can result in death or serious injury.

Warranty/Remedy

Banning warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Banning's standard product warranty applies unless agreed to otherwise by Banning in writing; please refer to your order acknowledgment or consult your local sales office for specific warranty details. If warranted goods are returned to Banning during the period of coverage, Banning will repair or replace, at its option, without charge those items that Banning, in its sole discretion, finds defective. The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Banning be liable for consequential special, or indirect damages.

While Banning may provide application assistance personally, through our literature and the Banning web site, it is buyer's sole responsibility to determine the suitability of the product in the application.

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