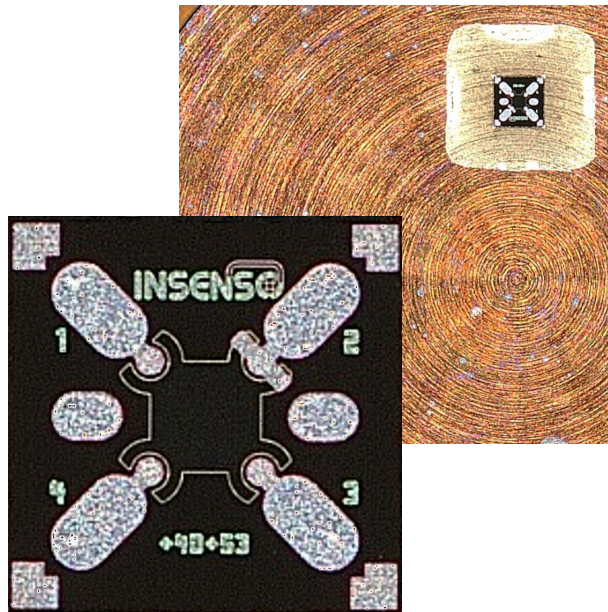


IPD25 SERIES - Strain Gage Technology

Strain gage silicon pressure sense dies



Key Features

- Suitable for pressure from 10 up to 1000bar and beyond
- Secondary passivation for increased robustness
- High reliability and stability
- Fast response
- High impedance bridge
- Pressure proportional output signal
- Very cost efficient due to tiny size

Applications

- Automotive applications
- Industrial controls
- Medical instrumentations
- HVAC applications
- Harsh environments

Media

- Dry air
- Oil filled transmitters
- Non-corrosive gases
- Vacuum applications

Technology

- Piezo resistive Wheatstone bridge

Shipping

- Wafers on tape and frame

Specification

Parameter	Range	Min.	Typ.	Max.	Unit
Electric and environmental					
Bridge resistance ^{a,b)}	All	5.0	5.5	6.0	kOhm
Supply voltage	All		5	12	V
Operating Temperature	All	-40		+150	°C
Storage Temperature	All	-50		+150	
Temperature coefficient^{b,c)}					
Offset	All		±0.05		%FSS/K
Output span	All		-0.20		
Bridge resistance	All	+0.24	+0.28	+0.32	%/K
Performance^{b,c)}					
Offset	All	-50	0	+50	mV@5V
Sensitivity(Factor K) ^{d)}	All		75x10 ⁻¹¹		Pa ⁻¹
Non-linearity ^{e)}	All		±0.5		%FSS
Repeatability	All		±0.1		
Temperature hysteresis ^{f)}	All		±0.1		
Long-term stability	All		±0.25		%FSS/year

a) Bridge resistance before packaging.

b) The parameters are significantly impacted by the packaging, surface material the dies are attached to and the steel socket design. The values are just for a rough orientation and can be better with an excellent packaging.

c) 25°...85°C

d) Piezo resistive coefficient to support customer packaging simulations to estimate the output span

e) End point straight line

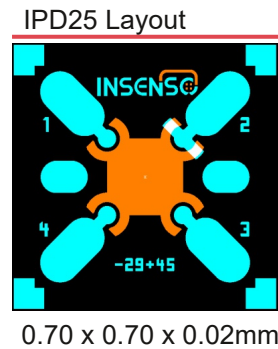
f) 25°...125°...25°C

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Strain gage silicon pressure sense dies



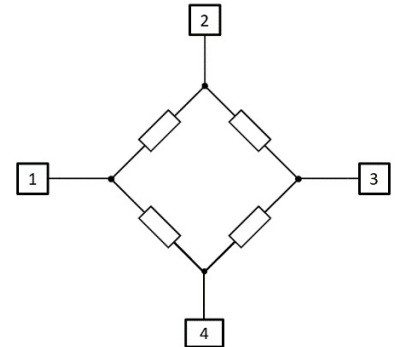
Die Layout and Size



Electrical Connection

Bondpad Signal

Output	
1	-Vout
2	+Vsupply/substrate
3	+Vout
4	-Vsupply



Ordering Code

Series		Size	Backplate Option / Type		Rang	Unit
Part Number		Pressure				
IPD25	SG	0.70x0.70mm	00G	0.0mm ^{a)} / Gage	000 ^{b)}	B bar

Order Code Example

IPD25 - SG 0.70x0.70mm - 00G 0.0mm / Gage 000 B bar

IPD25-SG-00G000B

a) No backplate, die thickness is 0.02mm.

b) The flexible pressure range is depending on the membrane diaphragm and geometry of your design.
Usual applications are ranging from 10 up to 1000bar and beyond.