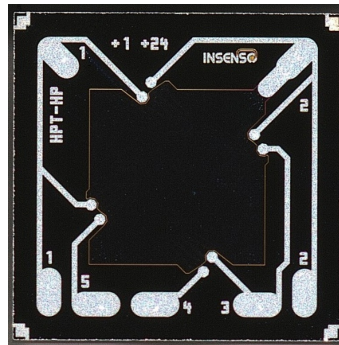


IPD10 SERIES - High Precision Technology

Absolute, gage and differential silicon pressure sense dies



Key Features

- World leading long-term stability
- Lowest pressure and temperature hysteresis
- Fast response
- High impedance bridge
- Pressure proportional output signal

Applications

- Industrial controls
- Medical instrumentations
- High precision pressure measurements

Media

- Dry air
- Oil filled transmitters
- Non-corrosive gases
- Vacuum applications
- High static pressure

Technology

- Piezo resistive Wheatstone bridge utilized with glass or silicon back plate

Shipping

- Wafers on tape and frame
- Waffle pack on request for samples

Specification

Parameter	Range	Min.	Typ.	Max.	Unit
Electric and environmental					
Bridge resistance	All	5.8	6.3	6.8	kOhm
Supply voltage	All		5	12	V
Operating Temperature	All	-40		+125	°C
Storage Temperature	All	-50		+150	
Temperature coefficient^{a)}					
Offset	All	-0.05 ^{b)}	±0.01	+0.05 ^{b)}	%FSS/K
Output span	All		-0.20		
Bridge resistance	All	+0.07	+0.09	+0.11	%/K
Performance					
Offset	All	-25	0	+25	mV
Non linearity ^{c)}	All		<0.3		%FSS
Pressure hysteresis	All		<0.02		
Temperature hysteresis ^{d)}	All		<0.05		
Long-term stability	All		<0.05		%FSS/year
Full scale output					
IPD10-LP-05D040M	40mbar		>50		mV@5V
IPD10-LP-xxx100M	100mbar	60	100	140	
IPD10-MP-xxx400M	400mbar	60	100	140	
IPD10-MP-xxx001B	1bar	60	100	140	
IPD10-HP-xxx004B	4bar	60	100	140	
IPD10-HP-xxx010B	10bar	60	100	140	
IPD10-HP-xxx040B	40bar	60	100	140	
IPD10-HP-08A100B	100bar	60	100	140	
IPD10-HP-08A400B	400bar	60	100	140	
Customized	Cust.		Cust.		

a) 25°...85°C

b) -0.10...+0.10 %FSS/K for IPD10-LP-xxGxxxx and IPD10-MP-xxA/Gxxxx

c) End point straight line

d) 25°...125°...25°C

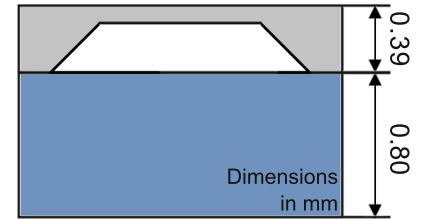
IPD10 SERIES - High Precision Technology

Absolute, gage and differential silicon pressure sense dies



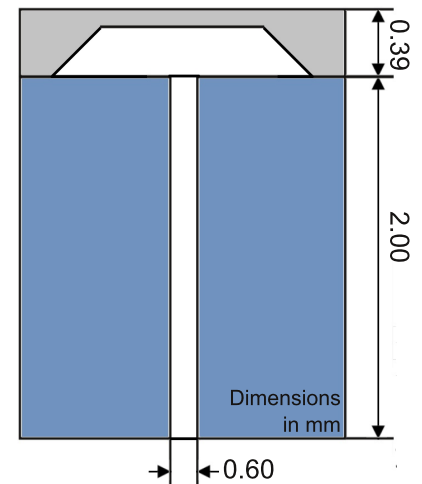
Options

IPD10-xP-08Axxxx



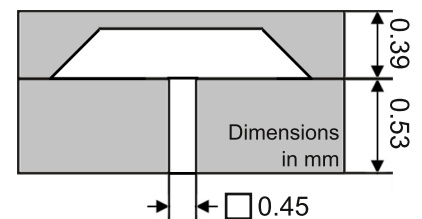
for Pressure Range 400mbar to 400bar

IPD10-xP-20Gxxxx



for Pressure Range 100mbar to 40bar

IPD10-xP-05Dxxxx



for Pressure Range 10mbar to 10bar

Parameter	Range	Min. from front side	Min. from rear side	Unit
Overload and burst pressure				
IPD10-LP-05D040M	40mbar	>2	>1	bar
IPD10-LP-xxx100M	100mbar	>4 ^{a)}	>2 ^{a)}	
IPD10-MP-xxx400M	400mbar	>8	>4	
IPD10-MP-xxx001B	1bar	>20	>10	
IPD10-HP-xxx004B	4bar	>40	>20	
IPD10-HP-xxx010B	10bar	>60	>30	
IPD10-HP-xxx040B	40bar	>120	>60	
IPD10-HP-08A100B	100bar	>200	-	
IPD10-HP-08A400B	400bar	>800	-	
Customized	Cust.	Cust.	Cust.	

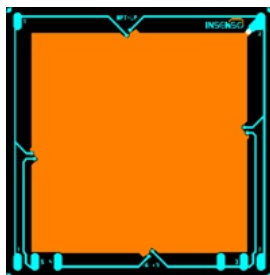
a) 3bar from FS and 1bar from RS for IPD10-LP-20Gxxxx type

Die Layout and Size

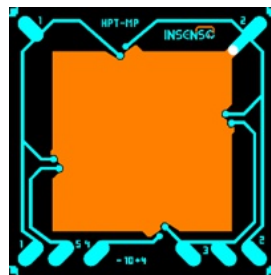
Low Pressure (LP)

Medium Pressure (MP)

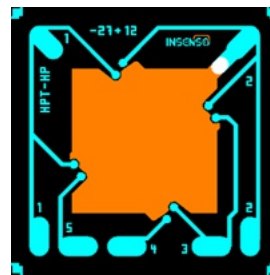
High Pressure (HP)



4.65 x 4.65 mm



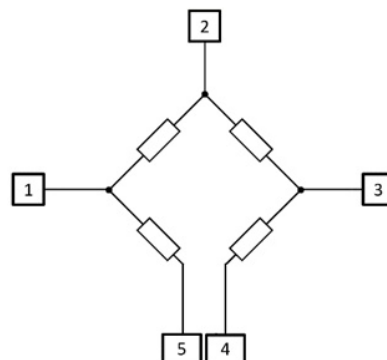
2.65 x 2.65 mm



2.05 x 2.05 mm

Electrical Connection

Bondpad	Signal
Output	
1	-Vout
2	+Vsupply/substrate
3	+Vout
4	-Vsupply
5	-Vsupply



Ordering Code

Series	Size	Back Plate Option / Type	Range	Unit			
IPD10	LP	4.65x4.65mm	05D	0.5mm / Differential	040	M	mbar
	MP	2.65x2.65mm	08A	0.8mm / Absolute	100		
	HP	2.05x2.05mm	08G	0.8mm / Gage	450		
			20G	2.0mm / Gage	001	B	bar
					004		
				010			
				040			
				100			
				400			

Order Code Example

IPD10 - MP 2.65x2.65mm - 05D 0.5mm / Differential 001 B bar

IPD10-MP-05D001B