

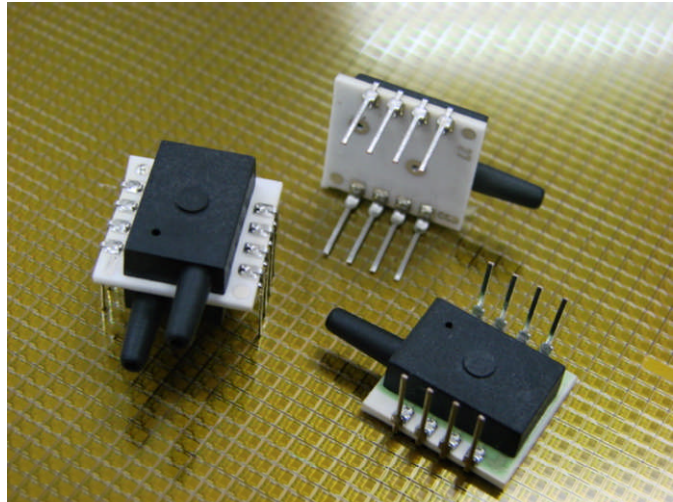
# Solid State Pressure Sensor

ANALOG  
OUTPUT

## CCD Series – Model 54A

### FEATURES

- Dual-in-line Package
- Calibrated Span and Offset
- Multi-order Temperature Compensation
- Low Profile Package
- 5 PSI to 150 PSI
- Custom Configuration Upon Request



### DESCRIPTION

The CCD 54A Series is a smart pressure sensor with calibrated and amplified analog output. Compensation of sensor offset, sensitivity, temperature drift and nonlinearity are accomplished in the factory via the latest ASIC technology with calibration coefficients stored in an on-chip EEPROM.

A variety of output configurations, including response time and voltage levels are available to provide a simple, ready-to-use solution for a wide range of applications. The low voltage version operates from 2.7 to 3.3V while the regular version operates from 4.5 to 5.5V.

The CCD Series including Models 53, 54 and 55 are available for pressure ranges from 0.15 psi to 150 psi. Custom ranges and calibrations are available. Please contact the factory for details.



RM/1005/10F Ho King Comm Ctr,  
2-16 Fa Yuen St. Mongkok Hong Kong,  
Tel: +852 81973212  
Email: [info@senphire.com](mailto:info@senphire.com)  
[www.senphire.com](http://www.senphire.com)

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# Characteristics

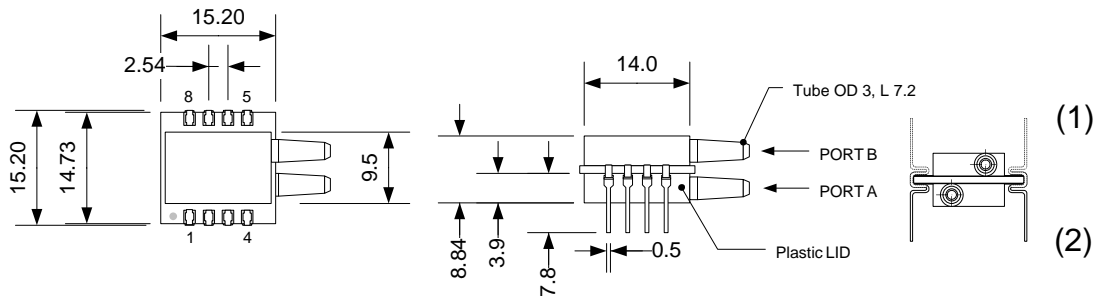
Unless otherwise specified, all parameters are measured at 5V excitation, 25 °C and 60% RH

Parameters	Min	Typ	Max	Unit
Supply Voltage <sup>Note 4</sup>	2.7 to 3.3		4.5 to 5.5	V
Supply Current			2.5	mA
Pressure Range <sup>Note3</sup>	5		150	psi
Zero Output (Offset)	0.428	0.500	0.572	V
Full Scale Output	4.428	4.500	4.572	V
Accuracy <sup>NOTE 1</sup>			1.8	%FS
Response Time		1	2	ms
Linearity	-0.5		+0.5	%FS
Thermal Hysteresis	-0.15		+0.15	%FS
Over Pressure			2X	Rated Pressure
Temp - Compensated	0		+50	°C
Temp - Operating	-20		+85	°C
Temp - Storage	-40		+125	°C

**Notes:**

1. Accuracy includes non-linearity, hysteresis, TCS and TCO inside the compensated temperature range, best fit straight line definition
2. Wetted materials contain PPA, RTV, glass, silicon and ceramic (Port A & B) and Au (Port A)
3. See ordering information for list of available pressure ranges
4. Specify desired operating voltage range when ordering. Output is ratiometric to supply voltage

## Dimensions:



Pin #	Description
1	N.C.
2	VSS
3	OUT
4	Vdd
5	N.C.
6	N.C.
7	N.C.
8	N.C.

NOTE:  
N.C. pins must be left floating  
A 0.1 uF capacitor must be connected between Vss and Vdd

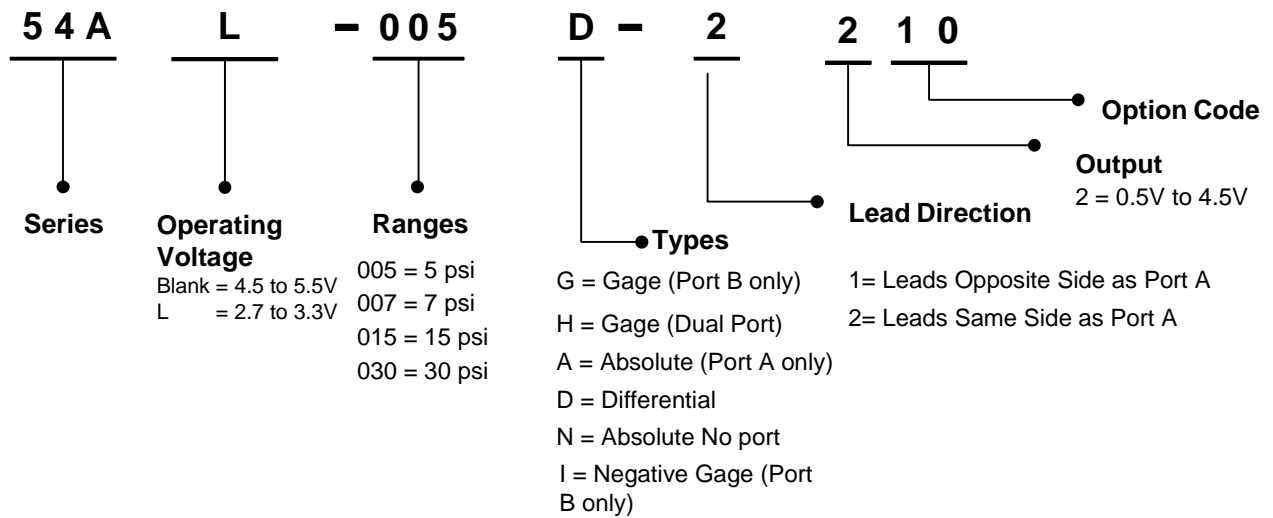
- NOTE:
1. Port B is used for positive differential
  2. Port A is used for Absolute
  3. Port B is used for Gage
  4. All dimensions are in mm
  5. Recommended tube: OD 4 ID 2,5 TygonTube
  6. Solder reflow max. 250 °C 5s

Delivery : 12 pcs per tube



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## Ordering Information



**Note:**

- 1) To specify single ended differential pressure (one side is always more +ve than the other) specify gage pressure with Dual port configuration. The device can be used for differential pressure by simply connecting the reference port (Port A) to the reference pressure instead of atmosphere.
- 2) Specifying Differential pressure means a +/- pressure range.
- 3) Differential pressure can only be specified to a maximum of +/-30 psi.
- 4) Custom outputs and pressure ranges available. Please contact us with your requirement
- 5) Maximum pressure for Negative Gage (Type I) is -15 psi. Negative gage has offset (0.5V) at 0 psi and full scale output (4.5V) at -xx psi where xx is the specified pressure range
- 6) Minimum absolute pressure that can be specified is 15 psi

**Example:**

Part number 54A 005 D 22 20 corresponds to 2.5V (@ 0 psi) +/- 2V (@ +/- 5 psi)  
 Part number 54A 005 G 22 20 corresponds to 0.5V (@ 0 psi) to 4.5V (@ 5 psi) for gage applications only  
 Part number 54A 005 H 22 20 corresponds to 0.5V (@ 0 psi) to 4.5V (@ 5 psi) for gage or single ended differential pressure

**Disclaimer/Warranty/Notice**

Senphire Ltd products are not authorized for use in applications where failure could result in loss of life or injury. While Senphire provides application assistance personally, through our literature and website, it is the responsibility of the customer to determine the suitability of the product for the intended application.

All information provided is believed to be accurate at the time of publishing however Senphire Ltd reserves the right to make changes without prior notice.

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Ver 1.8 7-Apr-14