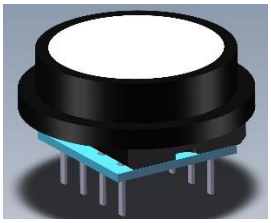
AV Sensors
AdVanced Sensor Design and Manufacture

CHT-NFP 1865 SERIES

CHT-IFP 1865 Series
Infusion Pump (IFP) Sensor
mV Output, Temperature Compensated
Constant Current & Voltage



DESCRIPTION

Advanced Sensor Ceramic Hybrid Technology (CHT) IFP Series is a temperature compensated, mV output, sensor designed for medical OEMs in either peristaltic or syringe pump applications.
The INfusion Pump (IFP) sensor is specifically designed for occlusions sensing in peristaltic pumps where the durable silicon rubber diaphragm can withstand the mechanical forces of rotating fingers applied through a flexible membrane.
The design of force/pressure transducers can also be used with other medical dispensing devices, such as syringe pumps, to improve safety and accuracy.
The sensor incorporates a silicon MEMS sense element that is individually tested and calibrated through laser trimming of the thick film resistors providing a high-level output at constant current or voltage. The sensor durable white diaphragm is precision dispense ensuring output at low pressures.

APPLICATIONS

- Infusion Pumps
- Syringe Pumps

FEATURES

- Force Measurement for Infusion Pumps
- Individually Calibrated
- Durable Silicone Diaphragm
- High Level Linear Output
- Temperature Compensated
- Constant Current or Voltage Source

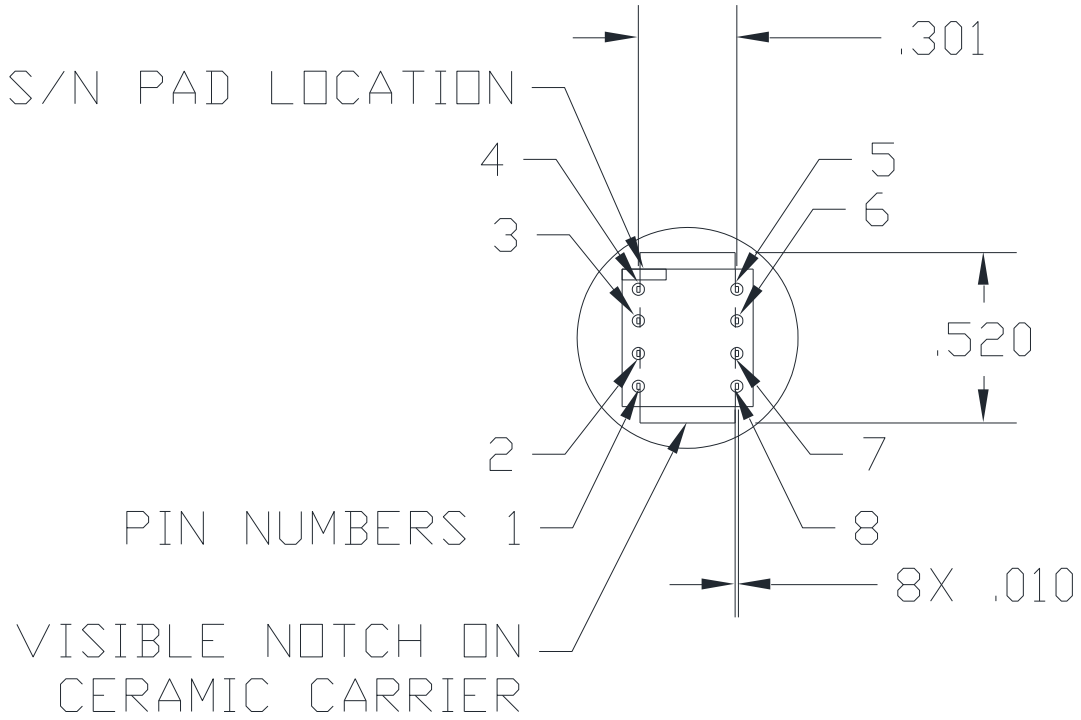
SPECIFICATIONS	Symbol	Min	Typical	Max	Unit	Note
Performance Characteristic						
Full Scale Span (CC)	FSS	98	100	102	mV	3
Full Scale Span (CV)	FSS	38	40	42	mV	3
Bridge Resistance, Input & Output (CC)		2.0		8.0	KΩ	
Bridge Resistance, Input & Output (CV)		8.0		40.0	KΩ	
Zero Pressure Offset		-2.0	±0.1	+2.0	mV	
Pressure Non Linearity		-0.25	±0.1	+0.25	%FSS	2
Repeatability		-0.015		+0.015	%FSS	
Hysteresis		-0.015		+0.015	%FSS	
Thermal Error of Span		-0.5		+0.5	%FSS	4
Thermal Error of Offset		-0.5		+0.5	%FSS	4
Temperature Hysteresis, Offset & Span		-0.20		+0.20	%FSS	4
Insulation Resistance		100MΩ			@50VdcΩ	
Response Time				5	mS	
Long Term Stability, Offset & Span		-0.3		+0.3	%FSS	5
Weight			3.0		grams	
Compensated Temperature		-1 to 54			°C	
Operating Temperatures		-28 to 54			°C	

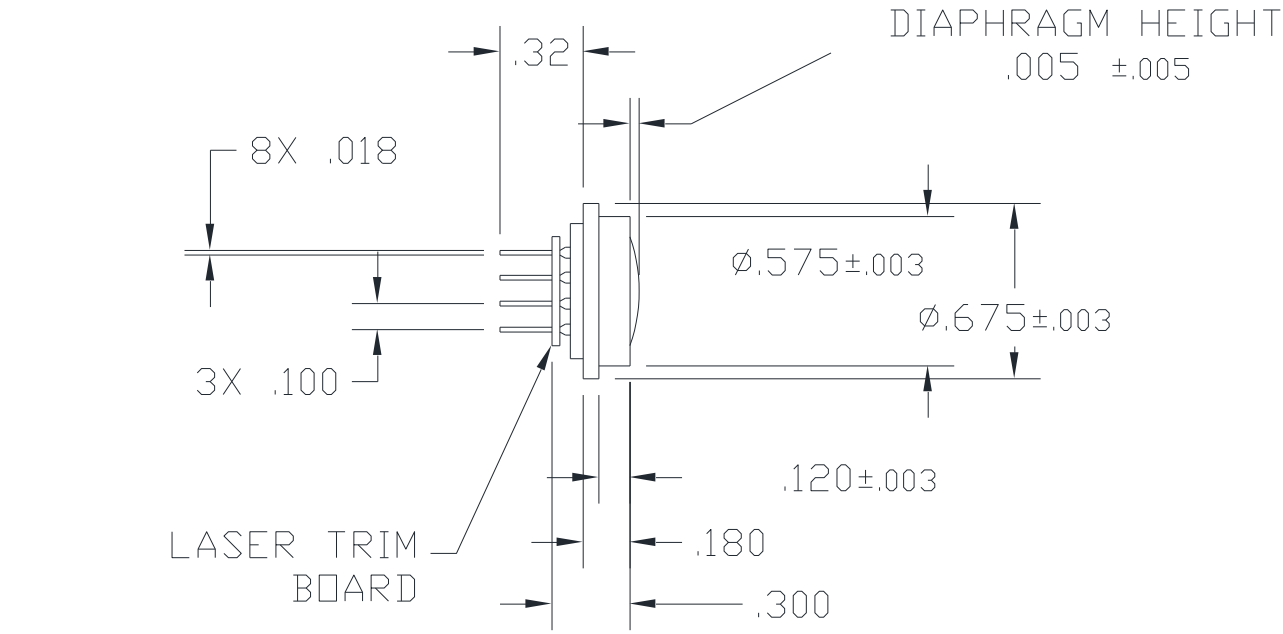
SPECIFICATIONS	Symbol	Min	Typical	Max	Unit	Note
Absolute Maximum Conditions						7
Supply Current				2	mA	
Supply Voltage				15	Vdc	
Storage Temperature		-28		54	˚C	
Overage Pressure						
Burst, Gauge				3x	Range	6
Media Compatibility		CDA, Non Ionic, Non Corrosive Gases				
Wetted Materials		Dimethyl Silicone, Glass Filled PPS				

Reference Conditions:
Supply: 1.5mA ± 0.0015mA, 10 ± 0.01Vdc, Ta=27˚C, Ambient Pressure 860 to 1060mBar

1. All specifications at reference conditions unless otherwise noted. Output is ratio metric to supply voltage.
2. ½ Terminal Base Non-Linearity (Measured at 0, 50% and 100% FS).
3. Full Scale Span output at calibrated pressure range.
4. Deviation over compensated temperature range expressed as percentage of reading at 25˚C.
5. Deviation after 6 months period measured at reference conditions.
6. Maximum overpressure value is limited to 60psi for any configuration.
7. Exceeding Absolute Maximum Specification may damage the device. Extended exposure beyond the operating conditions may affect device reliability.

MECHANICAL DIMENSIONS in [mm]





PART NUMBERING FOR ORDERS

Series	Supply	Pressure Range	Pressure Units	Pressure Type (Range Availability) [Package Availability]	Options
CHT-IFP 1865 MV	CC=Constant Current CV=Constant Voltage	005 010 015 025 030	P=PSI	*G=Gauge (All Ranges)*	

Part Number Example: CHT-IFP 1865MV CC005PG CHT-IFP 1865MV Series, 0-5PSI Gage, Constant Current

WARRANTY

Pressure sensors have a limited one-year warranty to the original purchaser. AVSensors will repair or replace, at its option, without charge those items it finds defective. This is the buyers 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 AVSensors be liable for consequential, special, or indirect damages. This warranty does not apply to units that have been modified, misused, neglected or installed where the application exceeds published ratings. Specifications may change without notice. The information supplied is believed to be accurate and reliable as of this printing, however, we assume no responsibility for its use.