



The HM Series is ideal for high-volume, low and medium pressure, harsh-media applications.

COMPANY: Merit Sensor is a leader in piezoresistive pressure sensing and partners with clients to create high performing solutions for a variety of applications and industries.

SENTIUM: Merit Sensor products incorporate a proprietary Sentiium® technology, developed to provide a best-in-class operating temperature range (-40°C to 150°C) and superior stability.

TECHNOLOGY: Merit Sensor utilizes a piezoresistive Wheatstone bridge in a design that anodically bonds glass to a chemically etched silicon diaphragm. All products are RoHS compliant.

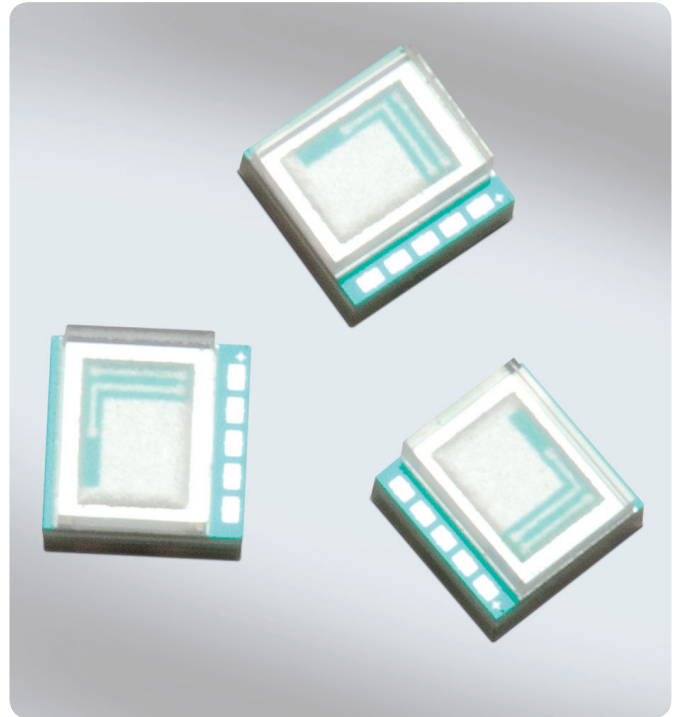
CAPABILITIES: Merit Sensor designs, engineers, fabricates, dices, assembles, and tests products from a state-of-the-art facility near Salt Lake City, Utah.

FEATURES

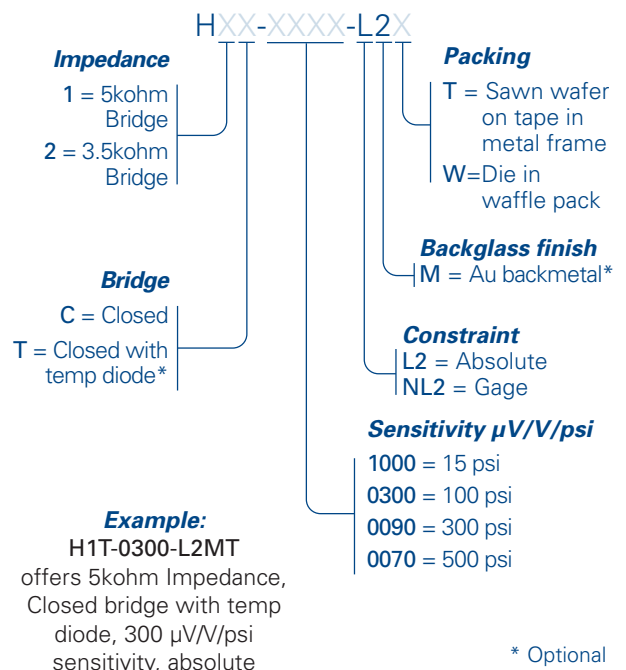
| | |
|--------------------|-----------------------------------------------------------------------------------------------|
| Range | 15 to 500 psi (1 to 34.5 bar; 103 to 3,447 KPa) |
| Type | Absolute; pressurized from cavity side Gage; pressurized from either side of the diaphragm |
| Media | Air, gases and liquids that are compatible with silicon and glass |
| Shipping | Wafers on tape, waffle pack |
| Flexibility | Sensitivity, resistance, bridge, constraint, etc. |

BENEFITS

| | |
|--------------------|-----------------------------------------------------------------------------------------------------------|
| Performance | Enjoy best-in-class performance due to Merit's proprietary Sentiium technology |
| Cost | Save money over time with high-performing die |
| Security | Feel confident doing business with an experienced company backed by a solid parent company (NASDAQ: MMSI) |
| Speed | Get to market quickly with creative and flexible solutions |
| Service | Experience prompt, personal, and professional support |



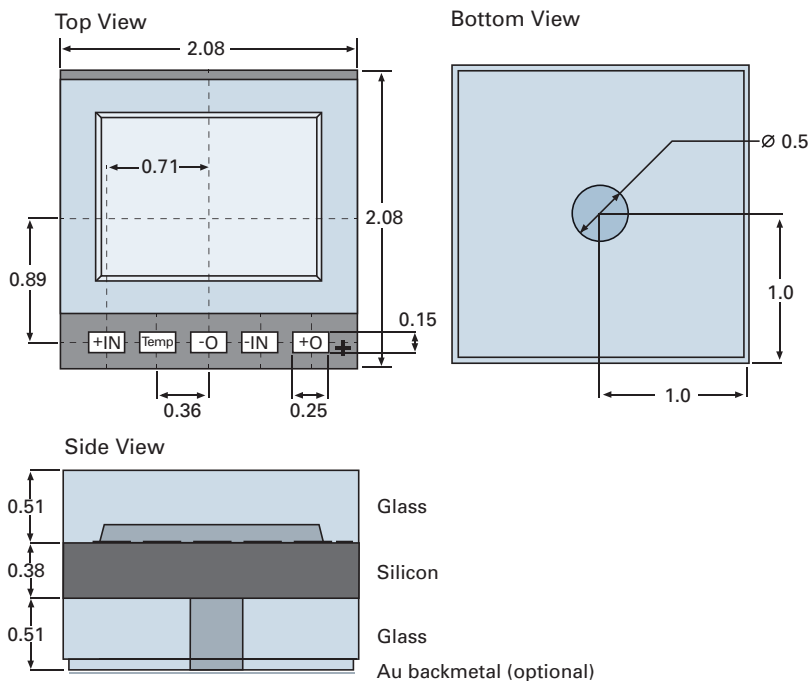
HM Series Part Number Configurator



SPECIFICATIONS

| Parameter | Minimum | Typical | Maximum | Units | Notes |
|-------------------------------------------------|---------|---------|---------|---------|--------------------------------------|
| Electrical & Environmental | | | | | |
| Excitation (I _n) | | 5 | 15 | V | Maximum: 3 mA |
| Impedance | 4000 | 5000 | 6000 | Ω | Optional: 3,500 +/- 500 |
| Operating Temperature | -40 | | 150 | °C | Sentium® technology |
| Storage Temperature | -55 | | 160 | °C | |
| Performance | | | | | |
| Offset | -10 | 0 | 10 | mV/V | Zero pressure; gage only; @25°C |
| Non-linearity | -0.2 | 0 | 0.2 | % FSO | Best Fit Straight Line; @25°C |
| Pressure Hysteresis | -0.1 | 0 | 0.1 | % FSO | @25°C |
| Temp Coeff – Zero | -25 | 0 | 25 | μV/V/°C | -40°C to 150°C |
| Temp Coeff – Resistance | 2300 | 2800 | 3300 | PPM/°C | -40°C to 150°C |
| Temp Coeff – Sensitivity | -1500 | -2200 | -2500 | PPM/°C | -40°C to 150°C |
| U _{diode} @ I _S = 40uA | 350 | 530 | 800 | mV | Room Temp |
| TC of U _{diode} | -4.0 | | -1.0 | mV/°C | -40 to 150C |
| Long-Term Stability | -0.2 | 0 | 0.2 | % FSO | |
| Long-Term Stability (15psi only) | -0.4 | 0 | 0.4 | % FSO | |
| Burst Pressure | 5X | | | | Full scale pressure |
| Burst Pressure (500 psi part) | 1500 | | | psi | |
| Full-Scale Output (@ 5 volts excitation) | | | | | |
| 15 psi (1 bar; 103 KPa) | 60 | 75 | 90 | mV | Other outputs available upon request |
| 100 psi (6.9 bar; 689.5 KPa) | 120 | 150 | 180 | mV | |
| 300 psi (20.7 bar; 2,068 KPa) | 110 | 135 | 160 | mV | |
| 500 psi (34.5 bar; 3,447 KPa) | 140 | 175 | 210 | mV | |

DIMENSIONS (millimeters, post cut)



ELECTRICAL

