

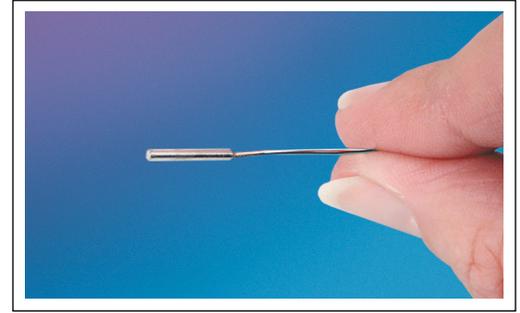


# ULTRAMINIATURE PRESSURE TRANSDUCER

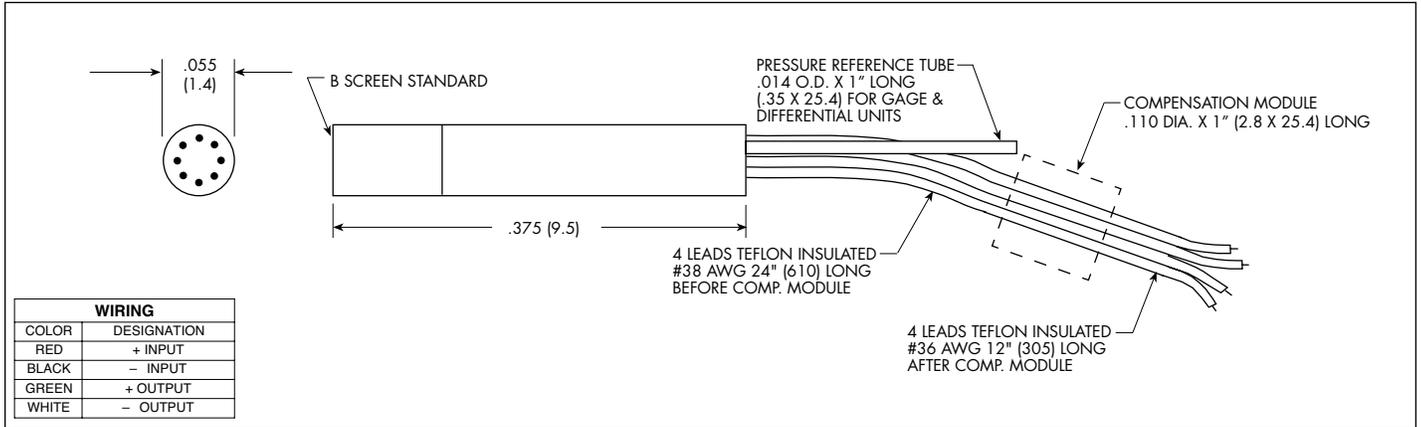
## XCQ-055 SERIES

- World's Smallest Diameter
- Ideal For Turbine Engine Probes and Wind Tunnel Applications
- Patented Silicon on Silicon Integrated Sensor **VIS<sup>®</sup>**
- Size And Shape Ideal For Incorporation In User Designed Probes
- Excellent Static And Dynamic Performance

The XCQ-055 Series allows for a very rugged package suited for probes, pressure rakes and other similar test set ups. This transducer is well suited for both dynamic and static pressure measurements in benign or harsh environments.



Kulite recommends the **KSC Series** of signal conditioners to maximize the measurement capability of the XCQ-055 transducer.



INPUT	Pressure Range	1.7 25	3.5 50	7 100	17 250	35 500	70 BAR 1000 PSI
	Operational Mode	Absolute, Gage, Sealed Gage, Differential			Absolute, Sealed Gage		
	Over Pressure	2 Times Rated Pressure					
	Burst Pressure	3 Times Rated Pressure					
	Pressure Media	All Nonconductive, Noncorrosive Liquids or Gases					
	Rated Electrical Excitation	10 VDC/AC					
	Maximum Electrical Excitation	12 VDC/AC					
	Input Impedance	1000 Ohms (Min.)					
OUTPUT	Output Impedance	1000 Ohms (Nom.)					
	Full Scale Output (FSO)	100 mV (Nom.)					
	Residual Unbalance	±5 mV (Typ.)					
	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)					
	Resolution	Infinitesimal					
	Natural Frequency (KHz) (Typ.)	210	300	400	550	700	1000
	Acceleration Sensitivity % FS/g Perpendicular	2.7x10 <sup>-4</sup>	1.75x10 <sup>-4</sup>	1.0x10 <sup>-4</sup>	8.0x10 <sup>-5</sup>	4.0x10 <sup>-5</sup>	2.0x10 <sup>-5</sup>
ENVIRONMENTAL	Insulation Resistance	100 Megohm Min. @ 50 VDC					
	Operating Temperature Range	-65°F to +250°F (-55°C to +120°C)					
	Compensated Temperature Range	80°F to +180°F (25°C to +80°C) Any 100°F Range Within The Operating Range on Request					
	Thermal Zero Shift	± 1% FS/100°F (Typ.)					
	Thermal Sensitivity Shift	± 1% /100°F (Typ.)					
	Steady Acceleration	10,000g. (Max.)					
	Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)					
PHYSICAL	Electrical Connection	4 Leads 38 AWG Before Comp. Module 24" Long / 4 Leads 36 AWG After Comp. Module 12" Long					
	Weight	.2 Gram (Nom.) Excluding Module and Leads					
	Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon					

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (F) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2014 Kulite Semiconductor Products, Inc. All Rights Reserved. Kulite miniature pressure transducers are intended for use in test and research and development programs and are not necessarily designed to be used in production applications. For products designed to be used in production programs, please consult the factory.