

# Columbia Research Laboratories, Inc. **General Purpose Accelerometers**

**Models 5005 & 5005-HT**  
**5006 & 5006-HT**  
**5007 & 5007-HT**  
**5008 & 5008-HT**

**\*Vibration & Shock**

**\*Sensitivities of 9 pC/g & 20 pC/g**

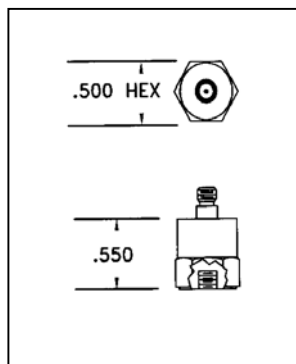
**\*Frequency Response to 12KHz**

**\*Case Grounded**

**\*Choice of Mounting Options**

The Models 5005, 5006, 5007 and 5008 Piezoelectric Accelerometers are offered in a choice of sensitivities and mounting configurations for general vibration and shock work. The unique design of the piezoelectric seismic system ensures that the units have no discernible spurious response to mounting torque, body strains, cable vibration, cable whip, pressure variations and most heat transients.

The stainless steel housing provides an environmentally rugged unit, while the epoxy seal offers protection against industrial environments. Its grounded case construction provides tight mechanical coupling which yields accurate, wideband shock and vibration data. The Models 5005 and 5007 are supplied with a removable mounting stud, and the Models 5006 and 5008 incorporate a fixed stud. Mounting adapters are available for those applications where electrical isolation is required, but this will limit the frequency range to 5KHz. High temperature units will operate in environments up to +500 Deg. F. *Consult the factory for customized versions of these sensors*



<b>Specifications</b>	<b>5005 &amp; 5005-HT 5006 &amp; 5006-HT</b>	<b>5007 &amp; 5007-HT 5008 &amp; 5008-HT</b>
<b>Transfer / Electrical</b>		
Charge Sensitivity <sup>1</sup>	20 +/-3 pC/g	9 +/-1.5 pC/g
Capacitance	650 +/-50 pF	
Frequency Linearity <sup>2</sup>	+/-5% Max 2 Hz To 10,000 Hz	+/-5% Max 2 Hz To 12,000 Hz
Mounted Resonant Frequency	50 KHz, Nom.	60 KHz, Nom.
Transverse Sensitivity	5% Max	
Amplitude Linearity	+/-1.0% (BFSL) / 500g	+/-1.0% (BFSL) / 1,000g
Insulation Resistance	20,000 M Ohm Min, 50 VDC Test	
Isolation Resistance	0 (Case Grounded)	
<b>Environmental</b>		
Vibration Limit	1,000 g Max (Sine)	
Shock Limit	2,000 g Max	5,000 g Max
Temperature Range	-100 To +350 Deg F (-73 To +175 Deg C)	
Models 5005, 5006, 5007, 5008		
Models ending in -HT	-100 To +500 Deg F (-73 To +260 Deg C)	
Humidity	0 To 98% R.H. (Non-Condensing)	
Base Strain Sensitivity	0.05 g/uE Equiv, Typical	
Electromagnetic Sensitivity	0.01 g (Equiv / 100 Gauss)	
<b>Physical</b>		
Configuration	Single Ended Compression	
Size	0.500 In. Hex x 0.550 In. H (12.7 mm Hex x 14.0 mm H)	
Weight	0.5 Oz (14 Gm)	
Case Material	18-8 Stainless Steel	
Electrical Interface	Coaxial 10-32 Thread	
Mounting	Model 5005 & 5005HT 10-32 Tapped Base	Model 5007 & 5007HT 10-32 Tapped Base
	Model 5006 & 5006HT 10-32 Integral Stud	Model 5008 & 5008HT 10-32 Integral Stud

**Accessories Supplied:**

- (1) Miniature Cable Assy., LNHT-10'
- (1) 10-32 x 0.375"L Mounting Stud, St Stl (Models 5005, 5005HT, 5007, 5007HT Only)
- (1) Hardwood Storage Case
- (1) Standard Calibration Data
- (1) Certificate of Calibration Traceable to N.I.S.T.

**NOTES:**

- <sup>1</sup> At +75 Deg F, 10g Peak, 100Hz; Lower Frequency Limit is Determined by Associated Electronics
- <sup>2</sup> Referenced to Sensitivity @ 100 Hz.
- <sup>3</sup> With Connector Protected or Sealed, Unit is Epoxy Sealed