

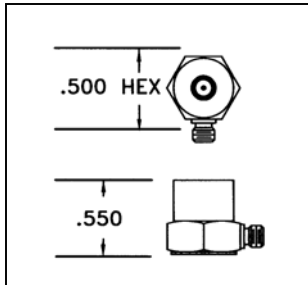
Columbia Research Laboratories, Inc. **General Purpose Accelerometers**

Models 5003 & 5003-HT

- *Shock To 20,000 G**
- *Sensitivity 1 pC/g**
- *High Natural Frequency**
- *Low Base Strain Sensitivity**
- *8-32 Removable Stud**

The Models 5003 and 5003-HT Piezoelectric Accelerometers are small, lightweight sensors with low sensitivity of 1 picoCoulomb/g making them excellent selections for most shock work. The high natural frequency imparts last response of less than 20 microseconds for shocks to 20,000 g.

The units incorporate a ring-shear crystal mass assembly within a stainless steel body to provide an extremely reliable sensor that is virtually insensitive to environmental inputs such as base bending and thermal transients. The grounded case construction provides tight mechanical coupling which yields accurate, wideband shock and vibration data. These accelerometers feature a 10-32 side connector and are provided with a 10' low-noise coaxial cable. The Model 5003-HT will operate in environments up to +500 Deg. F. **Consult the factory for customized versions of these sensors.**



Specifications

Transfer / Electrical	5003 & 5003-HT
Charge Sensitivity ¹	1 +/-0.5 pC/g
Capacitance	300 +/-60 pF
Frequency Linearity ²	+/-5% Max 2 Hz To 10,000 Hz
Mounted Resonant Frequency	50 KHz, Nom.
Transverse Sensitivity	5% Max
Amplitude Linearity	+/-1.0% (BFSL) / 2,000 g
Insulation Resistance	20,000 M Ohm Min, 50 VDC Test
Isolation Resistance	0 (Case Grounded)
Environmental	
Vibration Limit	1,000 g Max (Sine)
Shock Limit	20,000 g Max, 0.25 mSec
Temperature Range	
Model 5003	-100 To +350 Deg F (-73 To +175 Deg C)
Model 5003-HT	-100 To +500 Deg F (-73 To +260 Deg C)
Humidity ³	0 To 98% R.H. (Non-Condensing)
Base Strain Sensitivity	0.003 g/uE Equiv, Typical
Electromagnetic Sensitivity	0.01 g (Equiv / 100 Gauss)
Physical	
Configuration	Shear
Size	0.500 In. Hex x 0.550 In. H (12.7 mm Hex x 12.7 mm H)
Weight	0.32 Oz (9 Gm)
Case Material	18-8 Stainless Steel
Electrical Interface	Coaxial 10-32 Thread
Mounting	8-32 UNF Removable Stud

Accessories Supplied:

- (1) Cable Assembly, LNHT-10'
- (1) 8-32 x 0.375"L Mounting Stud, St Stl
- (1) Hardwood Storage Case
- (1) Standard Calibration Data
- (1) Certificate of Calibration Traceable to N.I.S.T.

NOTES:

¹ At +75 Deg F, 10g Peak, 100Hz; Lower Frequency Limit is Determined by Associated Electronics

² Referenced to Sensitivity @ 100 Hz.

³ With Connector Protected or Sealed, Unit is Epoxy Sealed

Columbia Research Laboratories, Inc. 1925 Mac Dade Blvd. Woodlyn, PA 19094
Phone: 1.800.813.8471 / Fax: 610.872.3882 / email: sales@columbiaresearchlab.com