

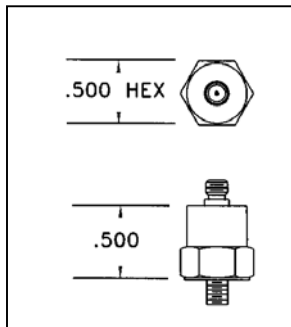
Columbia Research Laboratories, Inc. General Purpose Accelerometers

Models 5004 & 5004-HT

- *Shock To 100,000 G
- *Sensitivity 0.1 pC/g
- *High Natural Frequency
- *Low Base Strain Sensitivity
- *Electrically Isolated
- *10-32 Removable Stud

The Models 5004 and 5004-HT Piezoelectric Accelerometers are small, lightweight sensors with very low sensitivity of 0.1 picoCoulomb/g making them excellent selections for extremely high shock levels to 100,000 g. Its natural frequency of 100,000 Hz allows measurement of fast duration shock of 10 microseconds without ringing or distortion.

The units incorporate a shear-plate 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. Ground is electrically isolated from the case for reduced noise pickup. These accelerometers feature a 10-32 top connector and are provided with a 10' low-noise coaxial cable. The Model 5004-HT will operate in environments up to +500 Deg. F. *Consult the factory for customized versions of these sensors.*



Accessories Supplied:

- (1) Miniature Cable Assembly, LNHT-10'
- (1) 10-32 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.

Specifications

5004 & 5004-HT	
Transfer / Electrical	
Charge Sensitivity ¹	0.1 +/-0.5 pC/g
Capacitance	300 +/-60 pF
Frequency Linearity ²	+/-5% Max 2 Hz To 20,000 Hz
Mounted Resonant Frequency	100 KHz, Nom.
Transverse Sensitivity	5% Max
Amplitude Linearity	+/-1.0% (BFSL) / 10,000 g
Insulation Resistance	20,000 M Ohm Min, 50 VDC Test
Isolation Resistance	100M Ohm Min.
Environmental	
Vibration Limit	1,000 g Max (Sine)
Shock Limit	100,000 g Max, 0.25 mSec
Temperature Range	
Model 5004	-100 To +350 Deg F (-73 To +175 Deg C)
Model 5004-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 Plate
Size	0.500 In. Hex x 0.500 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	10-32 Tapped Base

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 Factory 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