# SINOCERA®

## PIEZOELECTRIC ACCELEROMETER MODEL: CA-YD-104

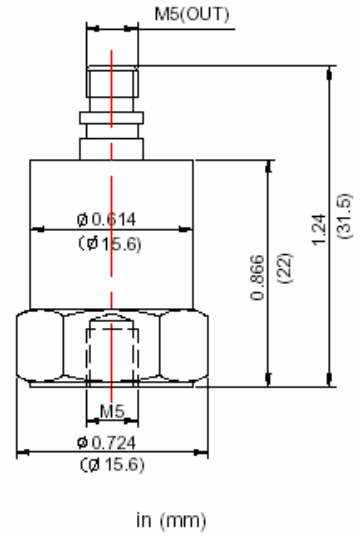
- **No External Power Required**
- **Frequency Response to 8 KHz**
- **Resonance Frequency at 20 KHz**
- **Top Connector**
- **Stud Mounted**

*actual size*

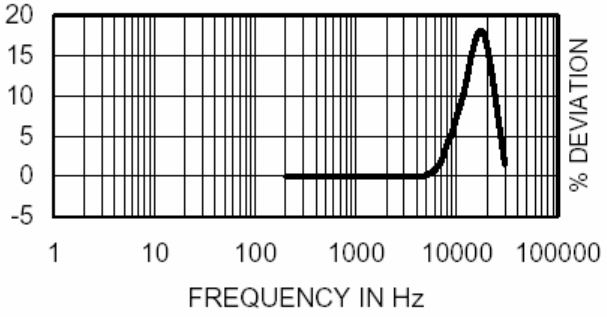
### Description

Sensors Model 104 is a stud mounted piezoelectric accelerometer designed for general vibration measurement on structures and objects. The sensor design is sealed against external contamination. The accelerometer is a self-generating device that requires no external power source for operation.

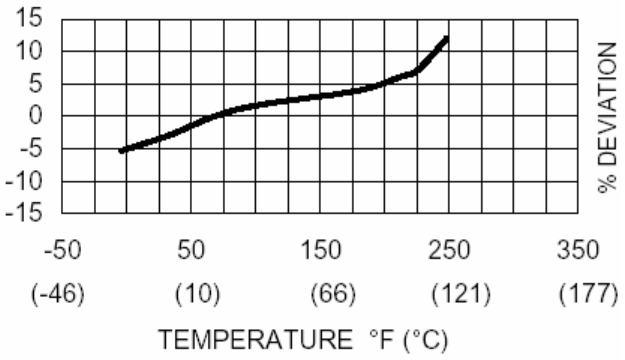
The Model 104 exhibits high resonance frequency. Signal ground is connected to the outer case of the unit. When used with an isolated mounting stud, the accelerometer is electrically isolated from ground. The accelerometer features a M5 top connector that is used with low-noise coaxial cable for error-free operation.




**Typical Amplitude Response**




**Typical Temperature Response**




Sinoceramics, Inc.
4Floor GUANGFEI Building, No. 929 GUILIN Rd., Shanghai 201103 China.

## SPECIFICATIONS

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C) and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

| | UNITS | |
|---|---|---|
| **DYNAMIC CHARACTERISTICS** | | |
| Axial Sensitivity | pC/g | 35 (30 minimum) |
| Transverse Sensitivity | % | ≤ 5 |
| Frequency Response | | See Typical Amplitude Response |
| Resonance Frequency | Hz | 20,000 |
| Amplitude Response [1] | | |
| ± 5 % | Hz | 1 – 5,000 |
| ± 1 dB | Hz | 0.5 – 8,000 |
| Temperature Response | | See Typical Temperature Response |
| Amplitude Linearity | % | < 1 |
| **ELECTRICAL CHARACTERISTICS** | | |
| Output Polarity | | Acceleration directed from the base into the transducer is defined as positive |
| Resistance | GΩ | >1 |
| Capacitance | pF | 1,200 |
| Grounding | | Signal ground connected to case |
| **ENVIRONMENTAL CHARACTERISTICS** | | |
| Temperature Range | | -4°F to 248°F (-20°C to +120°C) |
| Humidity | | Epoxy sealed |
| Shock Limit | g pk | 800 |
| Base Strain | equiv. g pk/μ strain | 0.00022 |
| Magnetic Field Sensitivity | equiv. g rms/gauss (/T) | 2E-5 (2) |
| Thermal Transient Sensitivity | equiv. g pk/°F (/°C) | 0.18 (0.1) |
| **PHYSICAL CHARACTERISTICS** | | |
| Weight | oz (grams) | 1.1 (30) |
| Case Material | | Stainless Steel |
| Mounting | | M5, torque 2 N-m (18 lbf-in) |
| Piezoelectric Material | | PZT-5 |
| Structure | | Center compression |
| Output Connector | | M5 receptacle, side mounting |

### ACCESSORIES

**Included:**

9002-120 Low Noise, Coaxial M5/10-32, 10ft (3.3 m)
9504-1 M5/10-32 Mounting Stud
Calibration Certificate

**Optional:**

9001-120 Low Noise, Coaxial M5/M5, 10 ft (3.3 m)
9504-4 M5/M5 Mounting Stud
9505-1 M5/10-32 Isolated Mounting Stud

**NOTES**

1. Low end response of the transducer is a function of its electronics.