# Ultra low power embedded accelerometer

## LVEP100-TO5

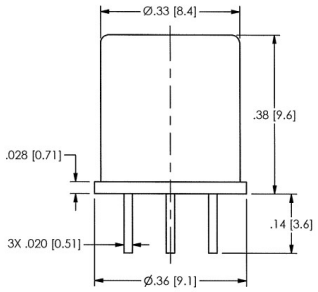
## SPECIFICATIONS

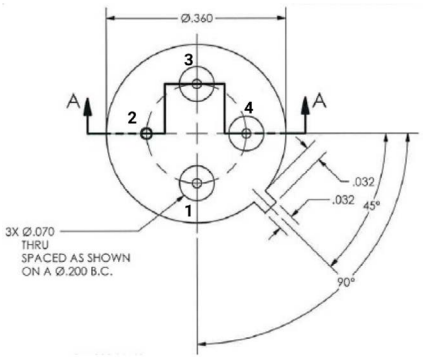
| | | |
|---|---|---|
| **Sensitivity, ±10%[1], 25°C** | | 100 mV/g |
| **Acceleration range** | | 14 g peak |
| **Amplitude nonlinearity** | | 1% |
| **Frequency response, nominal[2]:** | **±5%** | 6 - 5,000 Hz |
| | **±10%** | 4 - 7,000 Hz |
| | **±3 dB** | 2 - 12,500 Hz |
| **Resonance frequency, nominal** | | >25 kHz |
| **Transverse sensitivity, max** | | 5% of axial |
| **Sensitivity variation with temp:** | **–25°C** | +5% |
| | **+120°C** | -15% |
| **Power requirement:** | | |
| **Voltage source** | | 3.0 - 5.5 VDC |
| **Quiescent current, nominal** | | 60 µA |
| **Power-down mode** | | 0 µA |
| **Electrical noise, nominal, equiv. g:** | | |
| **Broadband** | **2.5 Hz to 25 kHz** | 600 µg |
| **Spectral** | **10 Hz** | 24 µg/√Hz |
| | **100 Hz** | 8 µg/√Hz |
| | **1,000 Hz** | 4 µg/√Hz |
| **Output impedance, max** | | 1,000 Ω |
| **Bias output voltage, settling time[3], nominal** | | 350 µs |
| **Including temp effects** | | 1.5 VDC ±5% |
| **Grounding** | | none: pellet case must be isolated from mounting surface |
| **Electromagnetic sensitivity, equiv. g, max** | | 200 µg/gauss |
| **Sensing element design** | | PZT, shear |
| **Sealing** | | hermetic |
| **Weight** | | 3.2 grams |
| **Case material** | | 304L stainless steel |
| **Header material** | | Kovar |
| **Mounting** | | epoxy; pellet must be isolated from mounting surface or TO5 4-pin mount |

**Notes:** [1] 5% sensitivity tolerance available upon request.
[2] Frequency response when epoxy mounted using flat shield surface.
[3] Based on BOV within 10% of nominal BOV at 25°C.
**Accessories supplied:** calibration data

### Key features

- 180 µW power consumption
- Fast BOV settling time of 350 µs
- Standardized TO5 semiconductor package




| Connections | |
|---|---|
| **Function** | **Pin** |
| common | 1 |
| case | 2 |
| output | 3 |
| power | 4 |

CE

Note: Due to continuous process improvement, specifications are subject to change without notice. This document is cleared for public release.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