

# Ultra low power embedded accelerometer

## LVEP100-TO5

### SPECIFICATIONS

Sensitivity, ± 10% <sup>1</sup> , 25°C		100 mV/g
Acceleration range		14 g peak
Amplitude nonlinearity		1%
Frequency response, nominal <sup>2</sup> :	±5%	6 - 5,000 Hz
	±10%	4 - 7,000 Hz
	±3 dB	2 - 12,500 Hz
Resonance frequency, nominal		>25 kHz
Transverse sensitivity, max		7% 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
	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 <sup>3</sup> , 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 TO-5 4-pin mount

**Notes:** <sup>1</sup> 5% sensitivity tolerance available upon request.

<sup>2</sup> Frequency response when epoxy mounted using flat shield surface.

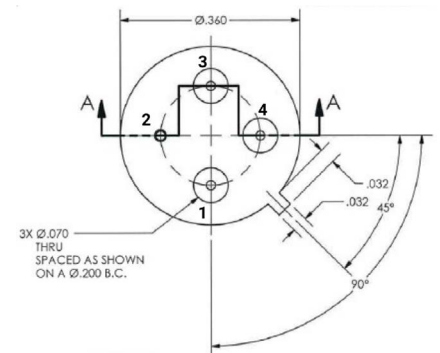
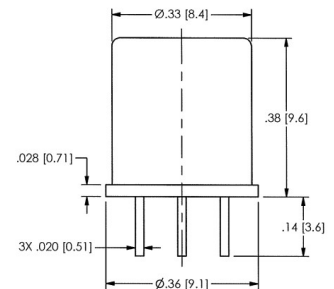
<sup>3</sup> Based on BOV within 10% of nominal BOV at 25°C. Power off for 30 sec minimum for fastest startup.

**Accessories supplied:** calibration data



### Key features

- 180  $\mu$ W power consumption
- Fast startup time, fast BOV settling time of 350  $\mu$ s
- Standardized TO-5 semiconductor package



### Connections

Function	Pin
common	1
case	2
output	3
power	4



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