



# SE1000-H

## HIGH FIDELITY ACOUSTIC EMISSION TRANSDUCER WITH PICO METER DISPLACEMENT SENSITIVITY

The SE 1000-H is a small aperture, high fidelity acoustic emission transducer with displacement calibration traceable to NIST over the frequency range of 8Khz to 400Khz. The design is based on conical piezoelectric element first introduced by Proctor of NIST many years ago.

The small 1.5 mm aperture, high sensitivity, and high fidelity features of the SE 1000-H provide an ideal solution for researchers interested in the study of frequency characteristics of plate waves.

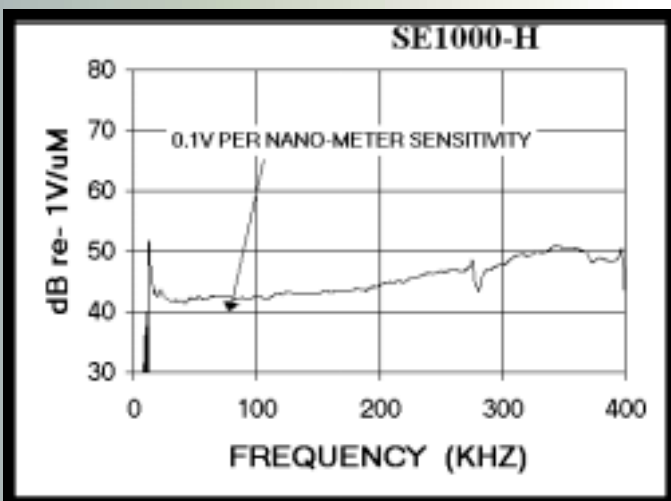
The transducer can be supplied with an internal preamplifier with 20dB of gain (SE1000-HI). This configuration will drive hundreds of feet of 50 ohm cable and additional amplification from the AESMART 2000 or AESMART 302A will provide displacement sensitivities greater than 1V per Pico meter. Comparable displacement sensitivities can be obtained by mounting the SE1000-HI to the flat end of a waveguide terminated in a sharp point at the opposite end (zero aperture). The SE1000-HI can also be provided with low frequency response down to 100Hz on request.

### SPECIFICATIONS

Diameter	0.800 in. (20mm)
Height	0.897 in. (23mm)
Aperture	1.5mm
Circuit Configuration	Single ended
Acoustic isolation	20dB between active element and case
Electrical isolation	1.5mm ceramic shoe
<b>SENSITIVITY</b>	
SE1000-H	100V per Micro meter with 1 meter cable @ 100Khz
SE1000-HI	1V per Nano meter with 20 dB internal preamplifier @ 100Khz
Temperature	-20 to 70 degrees C
Connector	Micro 10-32

### ACCESSORIES

- MB-1 BNC to micro 10-32 cable
- Mini-P Preamplifier
- 500J Power Adaptor
- AESMART Models 2000 and 302A



Dunegan Engineering Consultants, Inc.  
 P.O. Box 61808 • Midland, TX 79711  
 Telephone: (432) 561-5901 • FAX: (432) 563-0178  
 email: hal@deci.com • Homepage: www.deci.com