

# Sensor Noise & Stability



Our capacitance based sensors are designed with the industries lowest noise. Test results are shown below:

## Assessing Displacement using a FFT

A chart is shown below for the X-axis of a XY-100 stage. The stage was programmed with a 2 nm pk-pk sinusoidal signal. The displacement sensor signal is calibrated and sampled at a 10 kHz rate, digitally filtered at 10 Hz, and then sampled continuously for 8 minutes. The complete wave form is then transferred to a frequency spectrum program written in LabVIEW. The spectrum below shows very low noise from 0.01 Hz to 5 kHz and extremely high stability is apparent in the low frequency measurements.

