

Vibrating Sample Magnetometer (VSM) Specifications

Make: Lakeshore Model no: 7407



Measurement Type:

a) Moment Vs Temperature (FC & ZFC) b) Moment VS field c) Moment Vs Time

Applied field strength

38.1 mm (1.5 in) magnet air gap	16.7KOe (1.67T)
Field homogeneity	±0.1% over cantered 5 cm (2 in) diameter circle

Gauss meter probe:

Hall probe High stability; 74 mm (2.9 in) aluminium stem

For best results, the instrument and probe we warm up for at least 5 minutes before zeroing the probe, And at least 30 minutes for rated accuracy. The probe and the zero gauss chamber remains in the same temperature.

Moment measurement

Noise floor (emu RMS) :	
With single stage variable temperature option, 0.1 TC, 10 s/pt	1.25 μ emu
Dynamic range	1×10^{-7} to 103 emu
Time constants (TC)	0.1, 0.3, 1.0, 3.0, or 10.0 s
Moment stability ₂	Better than $\pm 0.05\%$ of full scale/day for fixed coil geometry at constant field and temperature
Reproducibility	Better than $\pm 0.5\%$, or $\pm 0.1\%$ of full scale, fixed rotation angle and range, with sample replacement
Moment accuracy	Better than 1% of reading $\pm 0.2\%$ of full scale with a geometrically identical test sample and calibrant

Measurement temperature range:

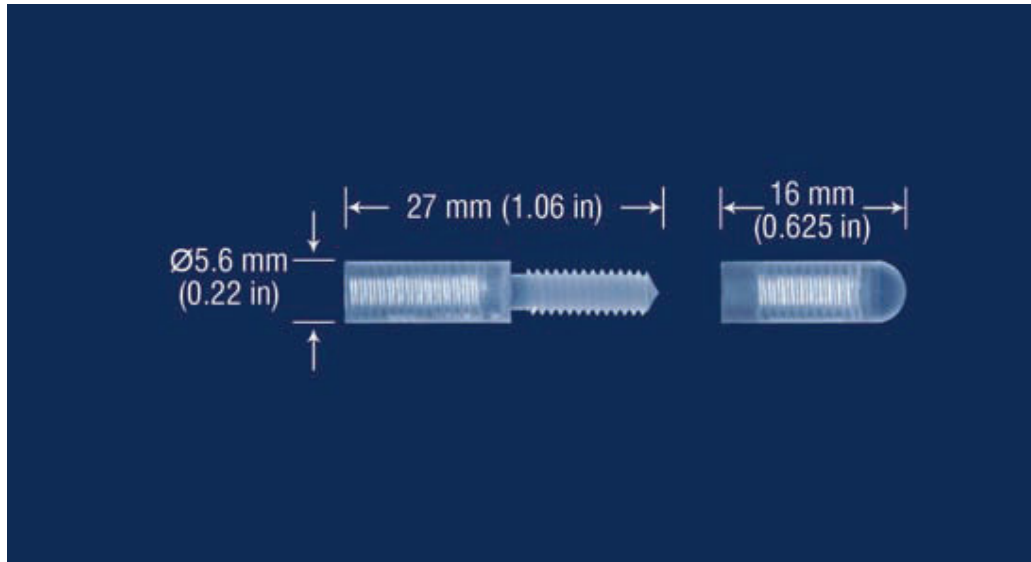
80K	To	400K
Temp stability		± 0.2 K
Temperature resolution		0.001 K

Sample Mass

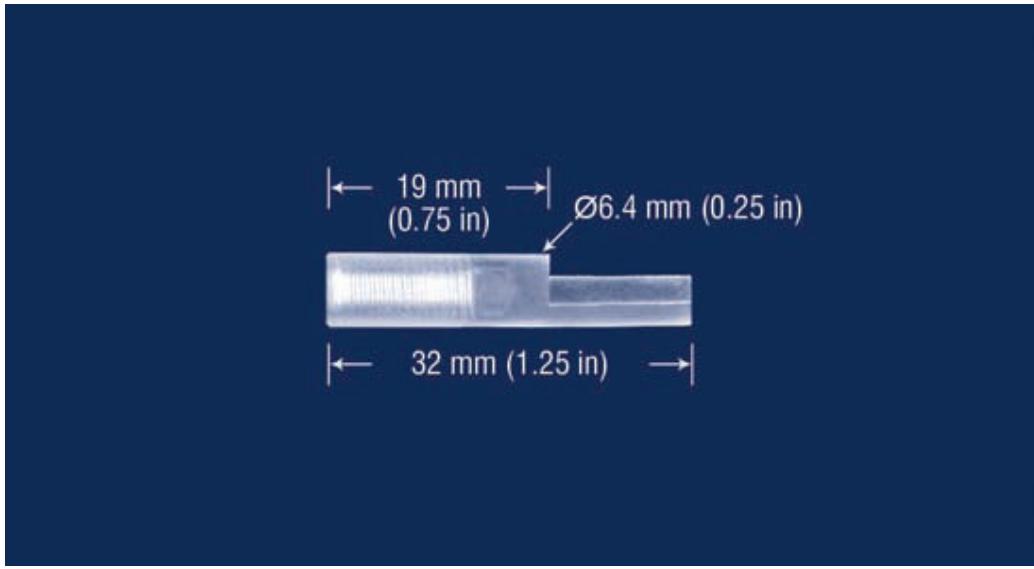
0 to 10 g (higher mass can be accommodated with decreased performance)

Sample Holder Type:

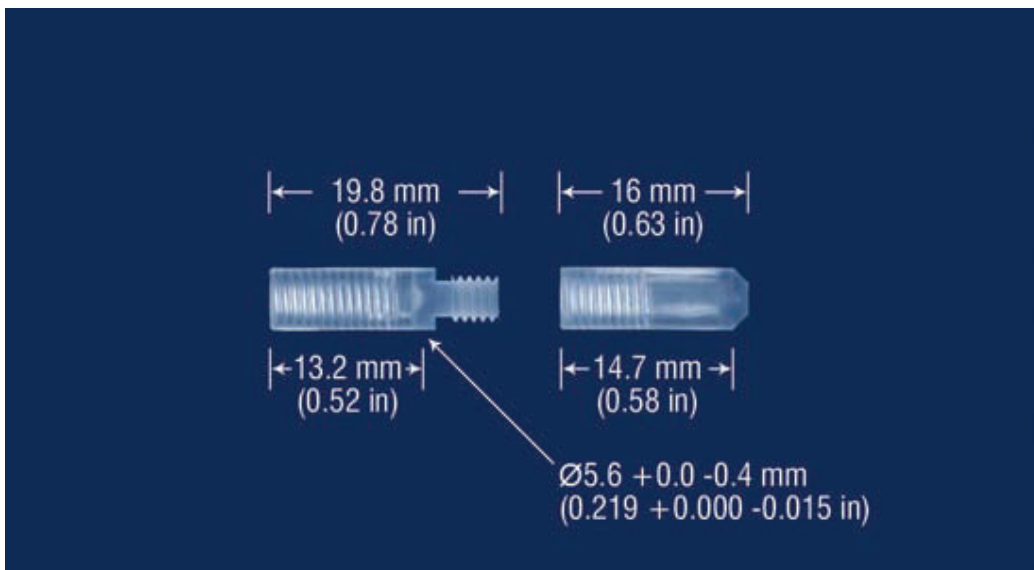
1. Powder Sample holder



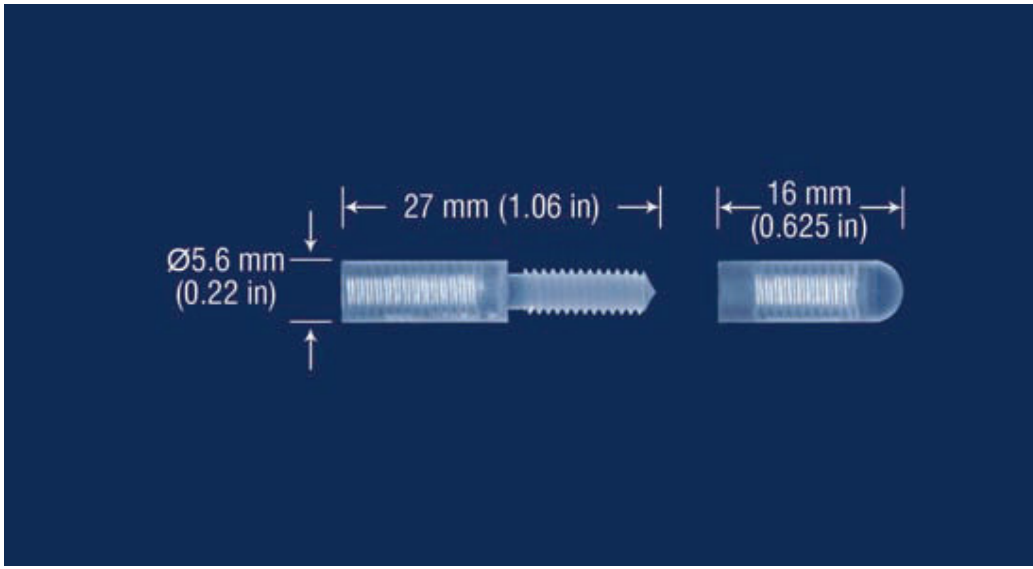
2. Thin film holder:



3. Liquid sample holder:



4 Bulk sample holder:



Some Experimental Results

