

# JANDEL Engineering Ltd

## Four-Pin Four-Point Probe Head



JANDEL ENGINEERING LTD. manufactures the 4-pin probe for use with Napson Corporation equipment. It has a 1" diameter body and is 1.6" high (25.4mm x 40.5mm high). The probe weighs 50g. Probes are built to high standards of mechanical accuracy. Specifications for radii, spacing, and planarity are verified by video inspection system and/or interferometer. Loads are verified by electronic force gauge. Needles have upper and lower jeweled bearings. The four gold plated pins are used to make electrical connection to the measurement system, and the four probe needles make contact to the material under test. A version with five probe tips is available for use in Napson systems that have added capability such as wafer P/N typing. You can see the 5 probe tip version here:

<http://www.fourpointprobes.com/jan5pt.html>

Information regarding the accuracy and construction of Jandel four point probes can be found here: [http://www.fourpointprobes.com/probe\\_app\\_notes.pdf](http://www.fourpointprobes.com/probe_app_notes.pdf)

PROBE SPACING	25-50 mils by 5 mil increments: 1.00 mm 1/2(pi) cm (1.591 mm or about 62.6 mils)
TOLERANCE	+/-0.01 mm
ARRANGEMENT	Linear or Square array
NEEDLES	Solid Tungsten carbide Ø 0.40 mm (Ø 0.30 mm for close-spacing) 45 degree included angle, phosphor-bronze connecting ligament
OTHER MATERIALS	50% osmium alloy tips available
RADII	12.5 µm min. to 500 µm max. polished with 2 µm diamond
RETRACTION TO INSULATING PAD	0.5 mm
PLANARITY	+/- 0.025 mm or better
LOADS	10 min. to 250 grams max. per needle. Not user adjustable
LEADS	4-way cable Teflon insulated (screened on cylindrical)
ELECTRICAL LEAKAGE	10 <sup>13</sup> ohms resistance between needles at 100 volts