

## NCPRE Four Probe System

**About the Instrument:** The equipment comprises of a finely machined tungsten carbide Jandel multi height probe having tip radius of 4mils or 100microns and tip spacing of 40mils or 1mm, which is housed in a mounting adaptor which is screwed to the raising and lowering mechanism incorporating the vertical stainless steel slide, operating lever shaft and micro-switch. A Keithley Multimeter is used as a voltmeter and a Keithley 220 current source provides the current.

**Measurements:** Sheet resistance of thin films having less resistivity to conducting ones (diffused / ion implanted surfaces) and bulk resistivity of wafers and ingots

### Brief System Features:

- Typically, a sheet resistance measurement of 1 ohms/square to 25,000 ohms/square, with an accuracy of around two decimal places is possible with this Four Probe System.
- Jandel probes have the provision for adjusting the probe tip pressure, making it suitable for measurement of samples over a wide range of resistances.
- Hard aluminium base can accommodate wafers upto 8" diameter and ingots upto 10" deep by 6" high. This base provides the flexibility of rotation by 360degrees and translation by 94 cm with indents to keep the base locked.
- Lever operated probe with switched current leads to prevent arcing
- The system comes with a dummy probe head that is used for height adjustment, preventing

