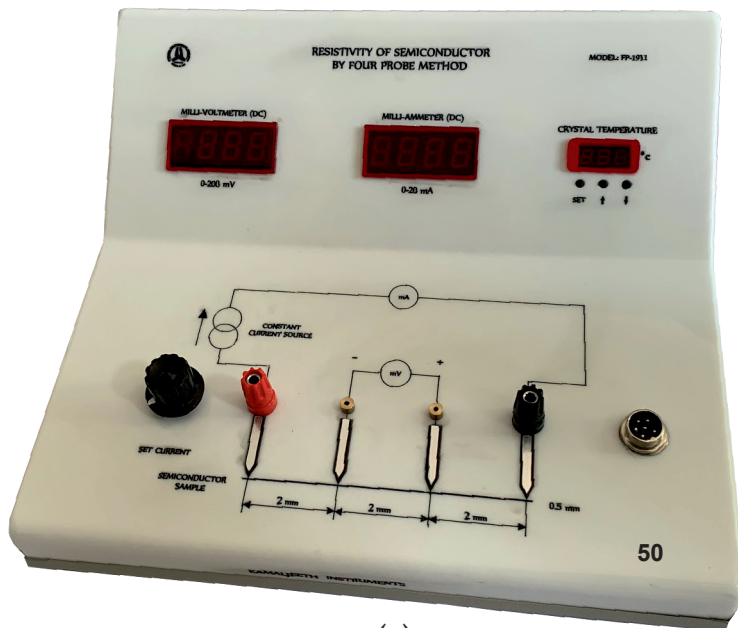


Experiment(s):

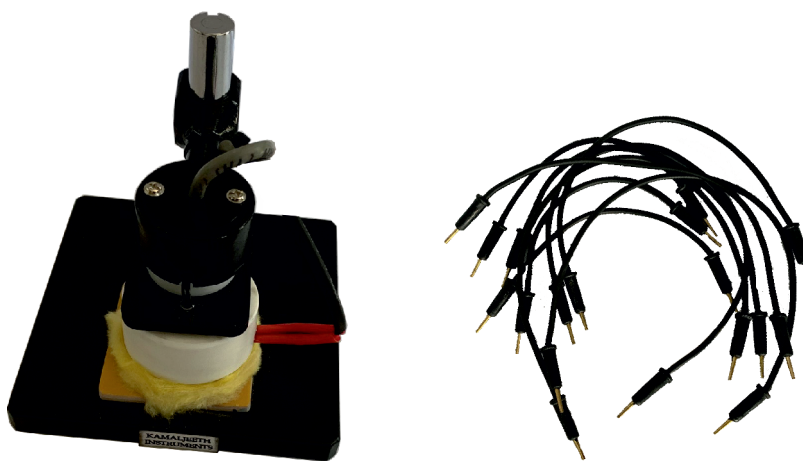
1. Resistivity variation with temperature for a semiconductor sample
2. Determination of energy gap of a semiconductor sample

(For more details, procedure & manual visit: www.kamaljeeth.net)

Reference : Lab Experiments Journal vol-11, No.1, Page-1
Lab Experiments Journal vol-10, No.4, Page-316



(a)



(b)

Experiment setup consists:

- a) Resistivity of semiconductor by four probe kit
- b) Four probe arrangement & Heater

Specifications:**a) Resistivity of semiconductor by four probe kit**

Voltmeter: 0-200 mV

Resolution: 0.1 mV

Ammeter: 0-20 mA

Resolution: 0.01 mA

Source: Built-in constant

current source with variable output current setting

Internally connected voltmeter and current meters

Rated Input: 220 V/50 Hz

or 110 V/60 Hz

Power Consumption: <200 W

Digital thermostat

Resolution: 0.1 °C

Max temperature: 110 °C

Set temperature: with-in ± 1 °C

b) Four probe arrangement:

Crystal: Mounted on heating element (electrically insulated)

Sample: Germanium

Size: 10 mm x 5 mm x 1 mm

Pitch of each probe: 2 mm

Heater: 100 W



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