

## Technical Specifications: Foil Heaters with integrated Temperature Sensors

S. No.	Specification	Specification Value
1	Type	Foil Heaters with integrated Temperature Sensors. (Please refer annexure-1 for more details).
2	Heater Configuration	Main + Redundant (Redundant Heater substrate mounted on the top of Main heater substrate - double layered heater. Ref annexure-1)
3	Heater Dimensions (Overall Area)	Within 35 mm x 17 mm (Temperature Sensors to be accommodated in this area as well. Ref annexure-1)
4	Heater Power	Min 3.5 Watts
5	Heater Power Density	Min 7 Watts/sq inch
6	Operating Voltage for Heater	5 V - 24 V
7	Temperature Sensor Configuration	Main + Redundant (Temperature sensor to be embedded in the bottom layer of the Foil Heater. Ref annexure-1)
8	Temperature Sensor Type	Bead Thermistor
9	Temperature Sensor Measurement Range	10 deg C to 150 deg C
10	Temperature Sensor Accuracy	Within +/- 1 deg C
11	Temperature sensor resistance	1 k Ohm to 20 k Ohm
12	Survival Temperature Range (for both Heaters and Temperature Sensors)	-20 deg C to 200 deg C
13	Lead wires	Vacuum compatible lead wires
14	Lead Wires' length	Min 0.5 m
15	Vacuum Compatibility	Required, min $10^{-5}$ torr