

SMART LAYERED HEATER SURFACES

ABSTRACT

A heater system and related methods of heating a surface are provided by the present invention that includes, in one form, a substrate defining a heating surface and a layered heater formed on the heating surface. A plurality of nodes are disposed along the heating surface and are in electrical contact with a resistive heating layer of the layered heater, along with a plurality of lead wires connected to the plurality of nodes. In one form, a multiplexer is in communication with the plurality of nodes through the plurality of lead wires, and a controller is in communication with the multiplexer, wherein the multiplexer sequences and transmits resistances from the plurality of nodes to the controller, and the controller controls an amount of power provided to each of the plurality of nodes based on the differences in resistances between the nodes.

FIGURE 1