Cast-In Heaters for the Semiconductor Processing Industry

Tempco has been at the forefront of the industry, addressing the challenges of stringent operating parameters and high quality requirements faced by original equipment manufacturers specializing in the semiconductor, wave solder and reflow surface mount processes.

Tempco’s highly engineered platens are capable of maintaining a temperature gradient of 5°F (2.77°C) across the entire working surface of the heater platen at the process operating temperature. The innovative design of this cast-in thermal platen incorporates the dual functions of being both a radiant and a convection heat source.

Cast-In Heaters for Wafer Processing

Our metallurgical knowledge and foundry expertise are the catalyst for producing cast-in heaters with the precise heat profiles and temperature gradient required for the process. Tempco’s state-of-the-art CNC machining capabilities will ensure that the working surface requirements of the part are precisely machined to customer requirements, including extremely flat surfaces, to within 0.0005 in (0.0127 mm) for optimizing the performance of the application.

Note: Cast-In heaters for semiconductor processing are made to customer specifications. For technical assistance, engineering data and available options please refer to pages 3-4 and 3-5. When ordering, please provide detailed design drawings including dimensions, critical tolerances, watts, volts, and any other features or special requirements.

Design Features & Options

- Casting Maximum Surface Temperature
  - Aluminum Alloy 319: 700°F (371°C)
  - Aluminum Alloy 356: 750°F (399°C)
- Interference Press Fit Construction – maximum surface temperature depends on base alloy used
- Surface Finish – Hard-Coat Anodized
- Built-in Temperature Sensors
- Selection of heating element and cooling tube terminations