

All-Polyimide (AP) Heaters

Flexible heaters provide uniform heat transfer to 260°C (500°F)

Overview

AP heaters are a high performance alternative to Minco's standard polyimide heaters, allowing higher temperatures and watt densities. Minco's unique ability to manufacture these heaters has prompted success in many high-temperature applications worldwide.

AP heaters must be factory mounted or clamped to heat sinks, and are only available as custom designs.

- Thin, lightweight heaters allow you to apply heat where it's needed ultimately reducing overall operating costs
- Etched-foil heating technology provides efficient thermal cycling of samples for increased throughput
- Low mass construction and factory lamination saves space and reduces cycle time
- Custom profiling offers uniform thermal performance of heating output for improved processing yields and productivity
- Maximum operating temperature of 260°C offers a higher temperature range than any other flexible film heater for maximum design flexibility
- Turnkey assembly solutions can drastically reduce assembly time and provide lowest total cost of operation
- Available in round, rectangular, and irregular shapes
- Power ratings to 120 W/in² (18.60 W/cm²)
- Resistant to most chemicals
- Optional built-in temperature sensors
- Contact Access: Minco Sales and Support for design assistance.

Typical applications

- Semiconductor wafer processing
- Heating of electronic components
- Packaging, fusing, and splicing equipment
- Medical diagnostic analyzers

Specifications

Temperature range: -200 to 260°C (-328 to 500°F).

With UL component recognition:

-200 to 240°C (-328 to 464°F).

Leadwires: Stranded, PTFE insulated, AWG 30 to AWG 20.



Heater thickness:

Over element: 0.012" (0.3 mm) max.

Over leadwire terminations: 0.150" (3.8 mm) ref.

Dielectric strength: 1000 VRMS at 60 Hz for 1 minute.

Insulation resistance: 1000 megohms min. at 500 VDC.

Outgassing: 0.36% total mass loss, 0.01% collected volatile condensable material, per NASA-JSC.

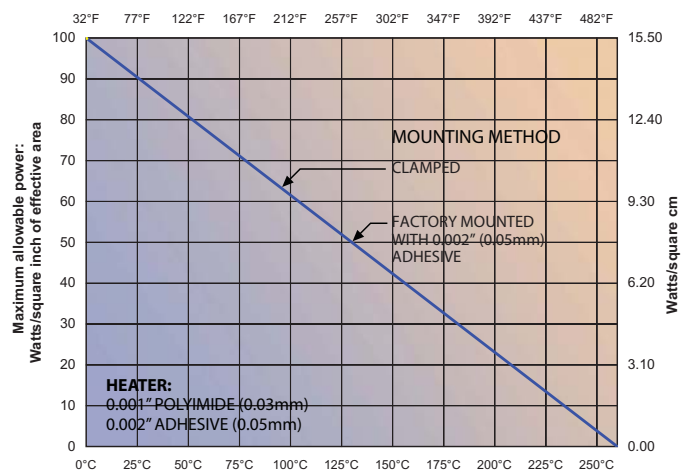
Agency Approvals: UL recognition optional.

Maximum size: 22" x 45" (560 x 1145 mm).

Consult Minco for larger size options.

Maximum resistance density: 1500 Ω/in² (233 Ω/cm²).

All-Polyimide Heaters Maximum Watt Density



Example: At 130°C, the maximum power of a factory-mounted AP heater is 50 W/in² (7.75 W/cm²).

Specifications subject to change

