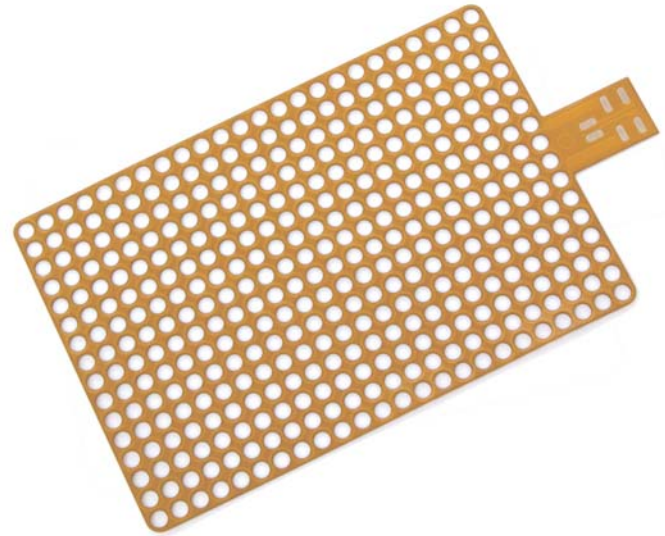


# 384-hole Heater

Rapid cycling, higher throughput for PCR applications.



## Overview

The 384-hole heater is designed for integration into high-throughput polymerase chain reaction (PCR) thermal cycling applications. The heater is profiled to maintain optimum temperature uniformity across a 384 well PCR sample block while rapidly cycling the reagents in the wells through the three cycle steps of denaturing, annealing and extension.

Minco uses a proprietary trimming method for the thin, flexible heater to achieve a tight hole-to-hole tolerance. This allows for almost perfect registration of the 384-hole heater to the PCR sample block. The net effect is that the reaction process can be viewed without any infringement by the heater.

- Thin polyimide heater construction and 384 holes provide ultra-fast cycling to increase testing throughput.
- Tight tolerance controlled clearance holes ensures optimal readings on the optics for consistent and reliable diagnosis
- Etched foil construction gives design flexibility in heater element trace routing to ensure the entire array is heated uniformly from edge-to-edge
- Optional integrated temperature sensors located close to the working surface ensure accurate and repeatable temperatures throughout processing
- Different insulation options depending on emissivity needs
- Value-add assembly for turnkey installation is available
- Can be customized to fit any application
- Can be constructed to comply with UL requirements

## Specifications

**Temperature range:** -45 to 150°C

**Heating element:** Etched foil

**Insulation:** Dependant on application; typically polyimide

**Standard dimensions:** 2.87" x 4.29" (73 mm x 109 mm )

**Resistance tolerance:** ±10% (contact Access: Minco if tighter tolerance needed)

**Dielectric strength:** 500 Volts

**Operating voltage:** Dependant on application; typically 24 VDC

**Power rating:** (see polyimide max watt density chart in Tech Spec HTK05)

**Minimum bend radius:** 0.030" (0.8mm)

**Power terminations:** Leadwires, solder pads or flex circuit interconnect

**Overall thickness:** 0.012" (0.3mm) over element, 0.050" (1.3mm) over leads

**Control accuracy:** Dependant on application; typically ±2°C (3.6°F)

**Backing:** Available with pressure sensitive adhesive (PSA)

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