

# Standard Heater/Sensors

150°C

Integrated heater/sensors are the ideal solution for many temperature control problems. Combining an etched foil heating element with an accurate, stable RTD or thermistor sensor in a single package provides a reliable system with reduced parts count and simplified installation.

Minco standard heater/sensors have the sensor element located in a non-heating area to measure the heat sink temperature — not the heating element temperature. The result is a more accurate reading and better control. Precise location of the sensor ensures consistent readings every time.

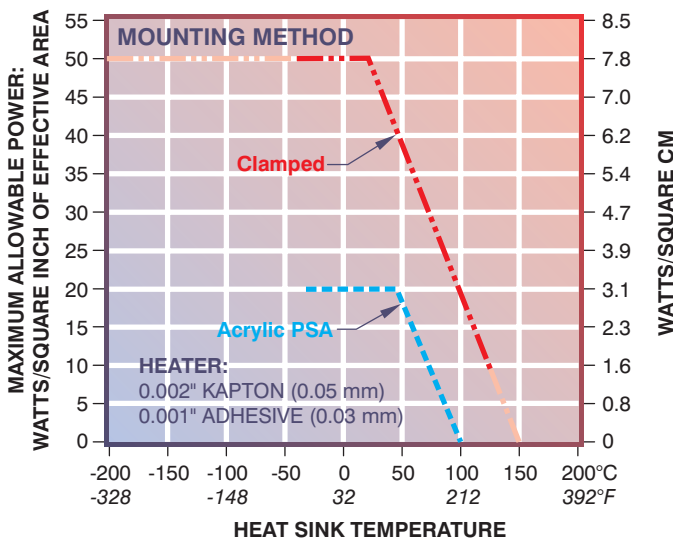
These heaters are ideal for use with the CT325 Miniature DC Controller (page K-5).



## Typical applications

- ◆ Medical diagnostic equipment
- ◆ Telecommunication equipment: DWDM, fiberoptic component enclosures
- ◆ Prototyping, experimentation and research

## Maximum watt density, heater/sensors



Example: At 70°C, the maximum power of a heater/sensor mounted with acrylic PSA is 10 W/in<sup>2</sup>.

## Specifications

**Temperature range:** -40 to 125°C (-40 to 257°F).

"S0" option only: -200 to 150°C (-328 to 302°F).

"B" option only: -32 to 100°C (26 to 212°F).

**Material:** Kapton/acrylic, 0.002/0.001" (0.05/0.03 mm).

**Resistance tolerance:** ±10% or ±0.5 Ω, whichever is greater.

**Sensor element:** 100 Ω or 1000 Ω platinum RTD, R(100°C)/R(0°C)=1.385 per IEC 751, or 50k Ω NTC thermistor. Etched sensor leads add up to 0.4 Ω resistance to measured value.

**Minimum bend radius:**

0.030" (0.8 mm) except in sensor area 0.5" (12.7 mm).

**Connection:** Tinned solder pads. Four loose leadwires, AWG 26, PTFE insulated, 12" (305 mm) long, stripped and tinned, provided for optional attachment to solder pads (2 heater, 2 sensor).

**Sensor time response:** Less than 0.1 second in water at 3 ft/sec (sensor only); less than 0.5 second system time.

**Sensor stability:** Drift less than 0.1°C/year in normal use.

## How to order

ASI5900	<b>Model number from table</b>
R71.4	<b>Heater resistance from table</b>
PD	<b>Sensor element</b> PD = Platinum 100 Ω ±0.12% at 0°C PF = Platinum 1000 Ω ±0.12% at 0°C TF = NTC Thermistor 50k Ω ±1% at 25°C S0 = No sensor element installed
	Note: Etched sensor leads add up to 0.4 Ω resistance to measured value.
A	<b>Backing options</b> A = No adhesive B = Pressure sensitive adhesive (PSA)
ASI5900R71.4PDA ← Sample part number	

Size (inches)		Size (mm)		Resistance in ohms ±10% or ±0.5 Ω, whichever is greater				Effective area (in <sup>2</sup> )	Model number
X	Y	X	Y						
1.00	2.00	25.4	50.8	71.4	32.0	23.2	16.9	1.35	ASI5900
1.00	3.00	25.4	76.2	43.9	19.7	14.3	10.4	2.23	ASI5901
3.00	3.00	76.2	76.2	21.2	9.50	6.90	5.00	7.99	ASI5902
4.00	4.00	101.6	101.6	21.1	9.50	6.80	5.00	14.7	ASI5903
5.00	5.00	127.0	127.0	21.4	9.60	6.90	5.00	23.5	ASI5904
1.50 diameter		38.1 diameter		73.1	32.8	23.7	17.3	1.25	ASI5905
3.00 diameter		76.2 diameter		21.1	9.50	6.80	5.00	6.93	ASI5906