



global solutions :
local support™

Tpcm™ 900 Series

Tpcm™ 900 is a high performance, non-electrically conductive phase change material. At 50°C, Tpcm™ 900 begins to soften and flow, filling the microscopic irregularities of both the thermal solution and the component's surfaces, thereby reducing thermal resistance.

Tpcm 900 is a flexible solid at room temperature and freestanding without reinforcing components that reduce thermal performance.

Tpcm 900 shows no thermal performance degradation after 1,000 hours @130°C, or after 500 cycles, from -25°C to 125°C. The material softens and does not fully change state resulting in minimal migration (pump out) at operating temperatures (see viscosity curve).

Tpcm 900 is supplied in rolls with top tabbed liners for easy manual or large volume automatic application. Individually die cut parts can also be supplied.

For sales information:

In Asia, please telephone +886-3-3129292

In Europe, please telephone +44-1342-315044

In the USA please telephone 1-800-246-9050

or visit: www.lairdtech.com

Features and Benefits:

- 0.03 °C-in²/watt thermal resistance
- Naturally tacky at room temperature, no adhesive required
- No heatsink preheating required
- Available in 3 thicknesses, 0.005", 0.010" and 0.020" (0.125mm, 0.25mm and 0.50mm)

Applications:

- High frequency microprocessors
- Notebook and desktop PCs
- Computer servers
- DC/DC converts
- Memory modules
- Cache chips
- IGBTs



Tpcm™ 900 Series

	Tpcm™ 905C	Tpcm™ 910	Tpcm™ 920	Test Method
Construction & Composition	Non-reinforced boron nitride filled film	Non-reinforced boron nitride filled film	Non-reinforced boron nitride filled film	
Color	Yellow	Yellow	Yellow	visual
Thickness	0.005" (0.13mm)	0.010" (0.25mm)	0.020" (0.51mm)	
Thickness Tolerance	± 0.001" (± 0.025mm)	± 0.001" (± 0.025mm)	± 0.002" (± 0.05mm)	
Density	1.31 g/cc	1.39 g/cc	1.39 g/cc	Helium Pycnometer
Temperature Range	-25 to 125°C	-25 to 125°C	-25 to 125°C	
Phase Change Softening Temperature	50°C to 70°C	50°C to 70°C	50°C to 70°C	
"Burn In" Temperature	70°C for 5 minutes	70°C for 5 minutes	70°C for 5 minutes	
Thermal Conductivity	0.7 W/mK	2.23 W/mK	2.23 W/mK	ASTM D5470 (modified)
Thermal Impedance @ 10 psi (69 KPa) @ 50 psi (345 KPa)	0.048 °C-in ² /W (0.31 °C-cm ² /W) 0.029 °C-in ² /W (0.19 °C-cm ² /W)	0.14 °C-in ² /W (0.90 °C-cm ² /W) 0.083 °C-in ² /W (0.53 °C-cm ² /W)	0.18 °C-in ² /W (1.14 °C-cm ² /W) 0.095 °C-in ² /W (0.61 °C-cm ² /W)	ASTM D5470 (modified)
Volume Resistivity	2 x 10 ¹³ ohm-cm	2 x 10 ¹³ ohm-cm	2 x 10 ¹³ ohm-cm	ASTM D257
Dielectric Constant @ 1MHz	3.1	3.1	3.1	ASTM D150

Standard Thicknesses: 0.005" (0.13mm) 0.010" (0.25mm) 0.020" (0.51mm)

Consult the factory for alternate thicknesses

Standard Sheet Sizes: 9" x 9" (229mm x 229mm)

Tpcm™ 900 sheets are supplied with a white release paper and a bottom liner. Tpcm™ 900 is available in rolls with an extended tab liner or individual die cut shapes.

Pressure Sensitive Adhesive: Pressure sensitive adhesive is not applicable for Tpcm™ products.

Reinforcement: No reinforcement is necessary.

-Our customers are reminded that they bear the responsibility for testing Laird Technologies' materials for their proposed use. Any information furnished by Laird Technologies and its agents is believed to be accurate and reliable, but our customers must bear all responsibility for the use and application of Laird Technologies' materials since Laird Technologies' and its agents cannot be aware of all potential use. Laird Technologies makes no warranties as to the fitness, merchantability, or suitability of any Laird Technologies' materials or products for any specific or general uses. Laird Technologies shall not be liable for incidental or consequential damages of any kind. All Laird Technologies' products are sold pursuant to the Laird Technologies' domestic terms and conditions of sale in effect from time to time, a copy of which will be furnished upon request.

A13518-00 Rev. G 6/6/06 E0# 6391