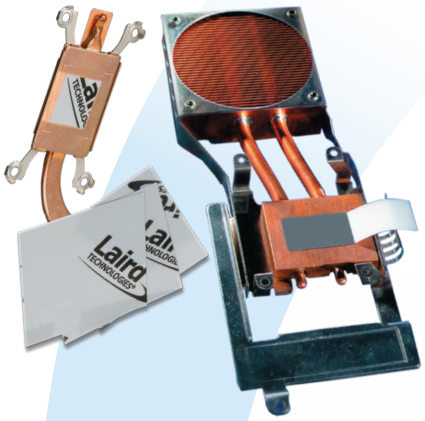
Laird TECHNOLOGIES

Innovative **Technology** for a **Connected** World

Tpcm™ 670
Tpcm™ 670DF



Tpcm™ 670 is a high performance, inherently tacky, easy to rework phase change thermal interface material. Developed specifically to meet the high thermal conductivity and low thermal resistance requirements of Intel® mobile processors. Tpcm 670 is optimized for multi-core and general CPU and GPU processors including Intel's Penryn Quad-Core mobile processor.

FEATURES AND BENEFITS

- Minimizes contact thermal resistance by filling the microscopic irregularities of the components it contacts. Begins to soften and flow at approximately 48ºC.
- Designed to minimize migration (pump out) at CPU operating temperatures using a unique material formulation that softens, but does not fully change phase.
- Naturally tacky at room temperature, requiring no adhesive.
- Heat sink preheating not required.
- Supplied on tabbed liners for easy manual or automatic application.
- Exceptionally high reliability.
- Available with Laird Technologies easy release DF (patent pending) layer. DF (patent pending) minimizes the force required to disassemble after burn-in while still maintaining the highest possible thermal performance and exceptional reliability.

PROPERTIES	Tpcm™ 670	*Tpcm™ 670DF	TEST METHOD
Color	Grey		Visual
Thickness, inches (mm)	0.008" (0.20) 0.010 (.25)	0.005 (0.125) 0.008" (0.20) 0.010 (.25)	
Thickness Tolerance, inches (mm)	+/-0.001" (0.025)		
Construction & Composition	Non-reinforced Film		
Specific Gravity, g/cc	2.50		Helium Pycnometer
Shelf Life	1 year		
Operating Temperature Range, °C	-40 to 125°C		
Phase Change Softening Range,°C	45 to 70°C		
Thermal Conductivity, W/mK	4.3		Hot Disk Thermal Constants Analyzer
Thermal Resistance Outer core, 25 micron die height offset, °C-cm²/W, (°C-mm²/W)	0.117 (11.7)		Intel Mobile TIM Tester
50 psi °C-in²/ W	0.010	0.025	ASTM D5470 (modified)
345 Kpa, °C-cm²/W	0.065	0.161	ASTM D5470 (modified)

* patent pending

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