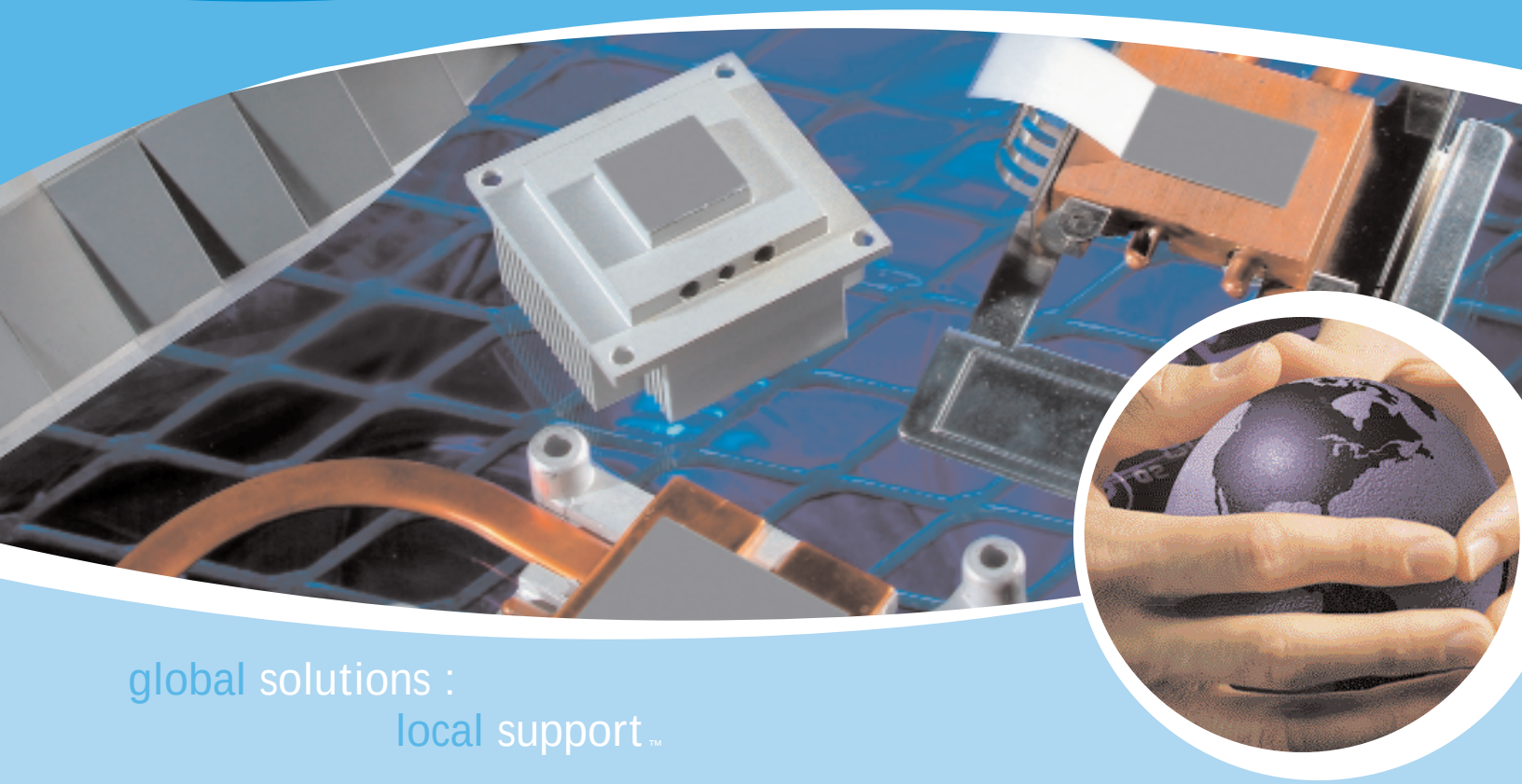
T-pcm™ 580 Series



global solutions :
local support™

T-pcm™ 580 Series

High Performance Phase Change Material

T-pcm™ 580 Series are high performance thermal phase change materials designed to meet the thermal, reliability, and price requirements of high end thermal applications. T-pcm™ 580 Series is inherently tacky, flexible and exceptionally easy to use.
T-pcm™ 580 is available in four thicknesses 0.003" (T-pcm™ 583), 0.005" (T-pcm™ 585), 0.008" (T-pcm™ 588) and 0.010" (T-pcm™ 5810).

At temperatures above its transition temperature of 50°C (122°F), T-pcm™ 580 Series begins to soften and flow, filling the microscopic irregularities of the components it contacts. The result is an interface with minimal thermal contact resistance. Due to the gradual change in viscosity (softening), T-pcm™ 580 Series minimizes migration (pump out).

T-pcm™ 580 Series can be supplied as cut parts in strips and rolls with top tabbed liners for easy application. The top tabbed liner can be removed immediately or provide a protective cover during shipping and removed at assembly. T-pcm™ 580 Series can also be supplied in sheets and custom die cut configurations. T-pcm™ 580 Series meets all environmental requirements including RoHS.

Features and Benefits:

- Low total thermal resistance (0.013°C-in²/W at 50 psi)
- Inherently tacky and easy to use - No adhesive required
- High reliability
- Meets all environmental requirements including RoHS
- Provides high value price / performance point

Applications:

- Microprocessors
- Chipsets
- Graphic processing chips
- Custom ASICS

For sales information:
In the USA please telephone +1-888-246-9050
In Europe please telephone +44-(0)-1342-315044
In Asia please telephone ++886-2-2287-4187
or visit: www.lairdtech.com

T-pcm™ 580 Series

Properties	T-pcm 583	T-pcm 585	T-pcm 588	T-pcm 5810
Construction and Composition	Non-reinforced film	Non-reinforced film	Non-reinforced film	Non-reinforced film
Color	Gray	Gray	Gray	Gray
Thickness	0.003" (0.076mm)	0.005" (0.127mm)	0.008" (0.2mm)	0.010" (0.25mm)
Density	2.87 g/cc	2.87g/cc	2.87 g/cc	2.87 g/cc
Operating Temperature Range	-40 to 125°C (-40 to 257°F)	-40 to 125°C (-40 to 257°F)	-40 to 125°C (-40 to 257°F)	-40 to 125°C (-40 to 257°F)
Phase Change Softening Point	50°C (122°F)	50°C (122°F)	50°C (122°F)	50°C (122°F)
Thermal Resistance Modified ASTM D5470				
10 psi	0.019°C-in²/W (0.12°C-cm²/W)	0.020°C-in²/W (0.13°C-cm²/W)	0.020°C-in²/W (0.13°C-cm²/W)	0.020°C-in²/W (0.13°C-cm²/W)
20 psi	0.016°C-in²/W 0.10°C-cm²/W)	0.016°C-in²/W (0.10°C-cm²/W)	0.016°C-in²/W (0.10°C-cm²/W)	0.016°C-in²/W (0.10°C-cm²/W)
50 psi	0.013°C-in²/W (0.08°C-cm²/W)	0.013°C-in²/W (0.08°C-cm²/W)	0.013°C-in²/W (0.08°C-cm²/W)	0.013°C-in²/W (0.08°C-cm²/W)
Thermal Conductivity	3.8 W/mK	3.8 W/mK	3.8 W/mK	3.8 W/mK
Volume Resistivity	3.0 x 10^{12}ohm-cm	3.0 x 10^{12}ohm-cm	3.0 x 10^{12}ohm-cm	3.0 x 10^{12}ohm-cm

Standard Packaging:

Sheets:	9" x 9" (228.6mm x 228.6mm) 18" x 18" (457.2mm x 457.2mm)
Cut Parts:	On strip with top tabbed liner Individual cut through