PTM6000

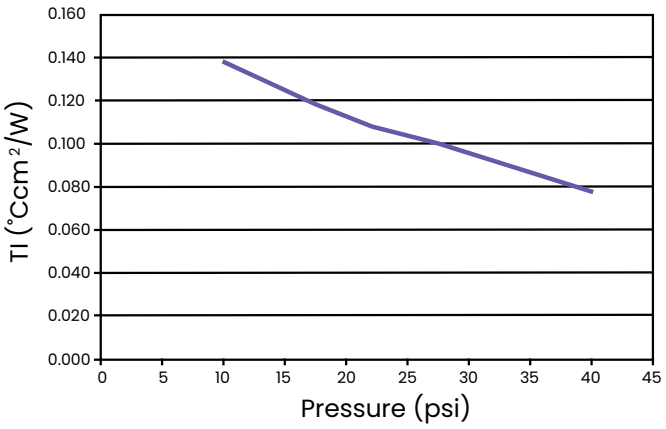
HIGH THERMAL CONDUCTIVITY PHASE CHANGE MATERIAL

Solstice's PTM6000, a highly thermally conductive Phase Change Material (PCM) in both pad and paste formats, is designed to minimize thermal resistance at interfaces and maintain extremely stable performance through reliability testing required for long product life applications.

Based on a robust polymer PCM structure, this material exhibits excellent wetting properties during typical operating temperature ranges, resulting in very low surface contact resistance.

The proprietary material provides superior reliability (pass 150°C baking 3000 hours, temperature cycling 4000 cycles, and HAST 192 hours) and maintains low thermal impedance (<0.16°Ccm²/W @ 2mil), making the PTM6000 Series desirable for high-performance integrated circuit devices.

PTM6000 Thermal Impedance (TI) vs. Pressure



PTM6000 is suggested for products with long life cycles.

FEATURES & BENEFITS

- High performance filler and polymer technology
- Phase change at 45°C
- Highly conductive filler loading to optimize performance
- Superior handling and reworkability
- Superior reliable thermal performance
- Available in both pad and paste formats

Solstice TIMs Serve Multiple Applications


Automotive & Power


IT/Enterprise


Telecomm


Consumer Electronics

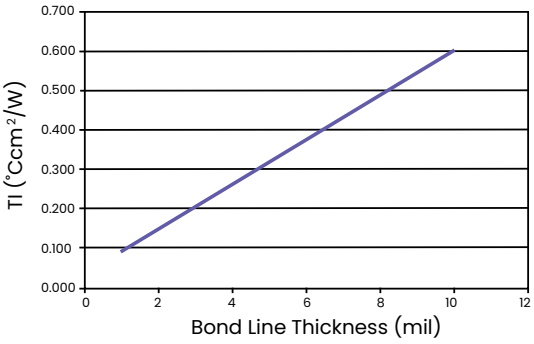

High-Brightness LED

Solstice

PTM6000 TECHNICAL INFORMATION

PHYSICAL PROPERTIES	UNIT	TEST METHOD	PTM6000	PTM6000-SP
Thermal Conductivity	W/m·K	ASTM D5470	4.4	4.4
Thermal Impedance @ no shim	°Ccm²/W	ASTM D5470 Modified	0.07	0.07
Specific Gravity	g/cm³	ASTM D374	2.3	2.0
Viscosity	Pa·s @2 1/s, 25°C	Rheometer	NA	222
Volume Resistivity	Ω·cm	ASTM D257-700	$2.1x10^{14}$	$2.1x10^{14}$
Thickness Range	mm		0.20-1.00	NA

PTM6000 is available in both pad and paste/ printable formats.



PTM6000 Thermal Impedance vs. Bond Line Thickness

STORAGE CONDITION
Refer to product label.

THERMAL IMPEDANCE POST RELIABILITY (ASTM E1461)

End of Line	0.10°C-cm²/W
Bake 150°C, 3000 h	0.08°C-cm²/W
HAST, 192 h	0.07°C-cm²/W
Temperature Cycling "B" (-55°C to +125°C, 4000 cycles)	0.07°C-cm²/W

Product Use

Clamping pressure and temperature are suggested to achieve a minimum bond line thickness of the thermal interface material, typically less than 1.5 mil (0.038mm) for best performance. The material must go through the phase change temperature to exhibit entitlement performance.

More Solstice TIMs

PTM6000 is part of Solstice's TIM Solutions family of phase change materials. Whatever the thermal challenge, we offer a TIM product that provides just the right characteristics for your application. Find out more about:

PTM7000 Series	PTM6000 Series
PTM5000 Series	PCM45F Series
HT Series	LTM Series

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