PTM7000

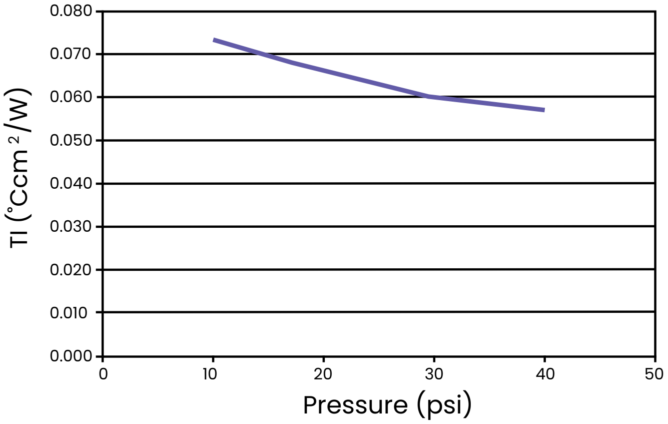
HIGH THERMAL CONDUCTIVITY PHASE CHANGE MATERIAL

Solstice's PTM7000 series, a super highly thermally conductive Phase Change Material (PCM) in both pad and paste formats, is designed to minimize thermal resistance at interfaces, maintain excellent performance through reliability testing, and provide scalable application at a competitive cost.

Based on a novel polymer PCM system, this material exhibits excellent interface wetability during typical operating temperature ranges, resulting in extremely low surface contact resistance.

A proprietary material provides superior reliability (pass 150°C baking 1000 hours, HAST 96 hours, T/C-B 1000 cycles) and maintains low thermal impedance (<0.07˚Ccm^2/W @ no shim), making the PTM7000 Series desirable for high-performance integrated circuit devices.

PTM7000 Thermal Impedance (TI) vs. Pressure



PTM7000 is suggested when long-term reliability is a primary need.

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

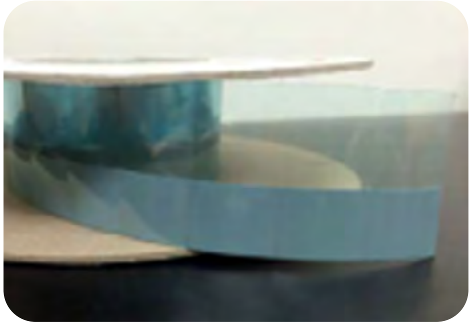
Consumer Electronics

High-Brightness LED

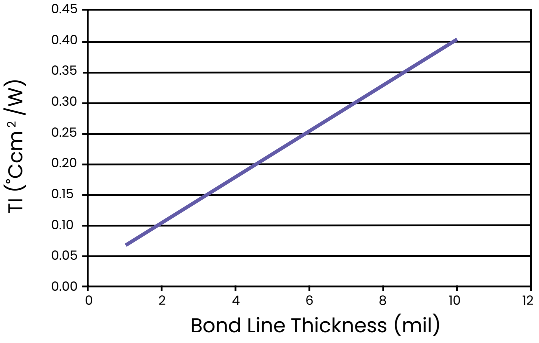
Solstice

PTM7000 TECHNICAL INFORMATION

PHYSICAL PROPERTIES	UNIT	TEST METHOD	PTM7000	PTM7000-SP
Thermal Conductivity	W/m·K	ASTM D5470	6.5	6.5
Thermal Impedance @ no shim	°Ccm^2/W	ASTM D5470 Modified	0.06	0.06
Specific Gravity	g/cm^3	ASTM D374	2.7	2.3
Viscosity	Pa·s @2 1/s, 25°C	Rheometer	NA	120
Volume Resistivity	Ω·cm	ASTM D257-700	$2.1x10^{14}$	$2.1x10^{14}$
Thickness Range	mm		0.20-1.00	NA



PTM7000 is available in both pad and paste/ printable formats.



PTM7000 Thermal Impedance vs. Bond Line Thickness

STORAGE CONDITION

Refer to product label.

THERMAL IMPEDANCE POST RELIABILITY (ASTM E1461)

End of Line	0.07°C-cm^2/W
Bake 150°C, 1000 h	0.07°C-cm^2/W
HAST, 96 h	0.07°C-cm^2/W
Temperature Cycling "B" (-55°C to +125°C, 1000 cycles)	0.06°C-cm^2/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

PTM7000 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
PTM5000 Series
HT Series
PTM6000 Series
PCM45F Series
LTM Series

by visiting electronic-materials.com

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