

M-GT90 Metal Coated Graphene Based Thermal Interface Material and Heatspreader

Features:

- Low thermal resistance.
- Reflow Option

Applications:

IGBT, GPU, CPU, LED, RF, Opto and power module cooling

Order status: small amount available now (□ 100pieces)

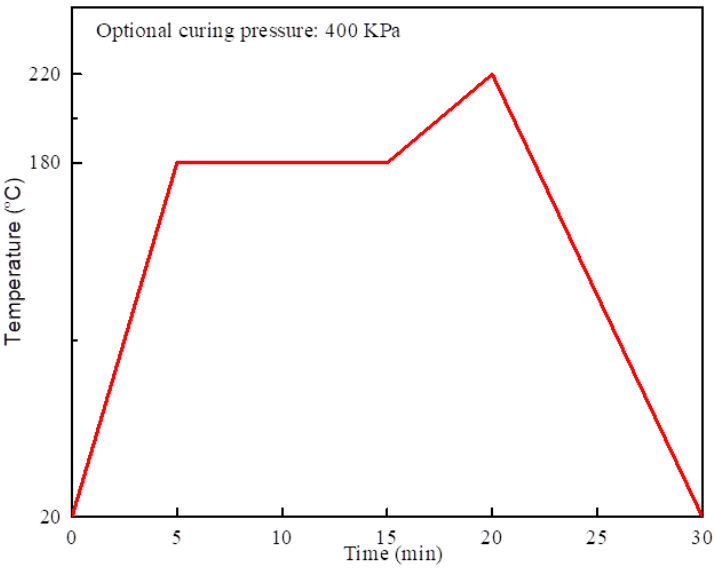
Description:

M-GT90 has the highest effective thermal conductivity and lowest thermal resistance among all types of commercially available thermal interface materials. With the coating of low melting point indium alloy, M-GT90 can greatly decrease the contact thermal resistance between two surfaces. The through-plane thermal conductivity among even outperforms pure indium. M-GT90 also has features of low density, flexible structures, and good maintainability. M-GT90 aims for any applications that require to dissipate large amounts of heat.

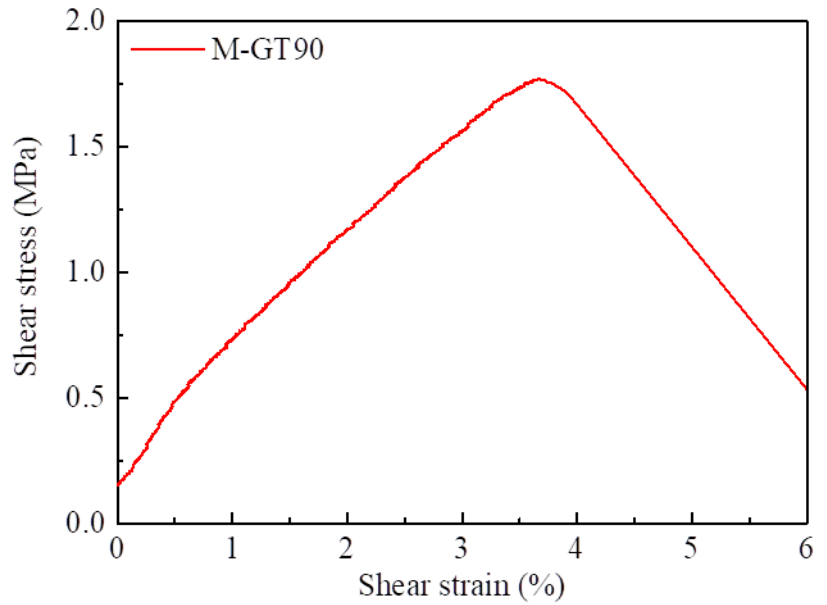
Physical Properties	Value	Units	Test Method
Size	□ 3*3	cm ²	
Thickness	0.4-1 (± 15%)	mm	
Roughness	<5	%	
Color	Silvery		
Filler Material	Graphene		
Bonding Material	Indium		
Density	1.8-2	g/cm ³	
Compressibility	5-10	%	ASTM
Recovery	5-8	%	ASTM
Compressive Strength	2-2.5	MPa	ASTM
Temperature Range	-40 to 150	°C	
Bulk Through-plane Thermal Conductivity	880-1000	W/mK	LFA447
Effective Through-plane Thermal Conductivity	89-95 (0 Kpa)	W/mK	LFA447
Thermal Resistance	3-5	Kmm ² /W	LFA447
Bulk In-plane (parallel to alignment) Thermal Conductivity	880-1000	W/mK	LFA447
Bulk In-plane (perpendicular to alignment) Thermal Conductivity	2-5	W/mK	LFA447
Specific Heat	0.6-0.7	J/g.K	Hotdisk
Minimum shear strength	1.7	MPa	Dage 4000

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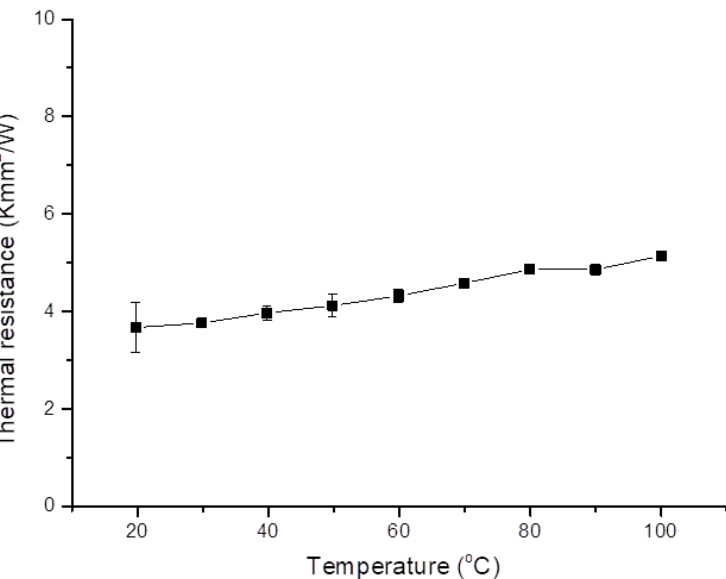
Temperature profile of sintering M-GT90



Shear strength of M-GT90



Thermal resistance of M-GT90 at different temperatures



Cross-section of M-GT90 bonded with copper substrate

