LED Packaging Materials

Honeywell



Honeywell LTM6300-SP Printable Thermal Interface Material

Honeywell LTM6300-SP **Printable Thermal Interface Material** for LED/LCD **Applications**

HIGH THERMAL CONDUCTIVITY PHASE CHANGE MATERIAL FORMULATED FOR LED/LCD

BENEFITS

- High Thermal Conductivity
- Ease of application
- Superior handling and reworkability
- Application: Screen/Stencil Printable
- More applications per kilogram due to lower specific gravity
- Superior reliability performance

OVERVIEW

Honeywell LTM6300-SP thermal interface material is a new product specifically formulated for LED/LCD applications. The patented* material was designed for application by screen or stencil printing. It has a tailored filler size that provides exceptional performance. LTM6300-SP thermal interface material changes phase at 45°C to ensure maximum surface conformance and hence minimal contact resistance. Use of LTM6300 material provides longer life, brighter lights and more stable color in LED/LCD devices.

MATERIAL CHARACTERISTICS*

Physical Properties

(2 mil shim @ 40 PSI)	LTM6300	
Thermal Conductivity	≥2.03	W/m°C
Thermal Impedance	≤0.40	°C cm²/W
Volume Resistivity	≥3.0x10 ¹⁵	Ω cm
Viscosity	<150,000	cps
Specific Gravity	1.8	g/cm ³

* Data shown is based on preliminary study of the product. Further engineering data will be collected during development to reflect performance in production batch modes.

LTM6300-SP

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U.S. Patents 6,451,422 / 6,673,434 / 6,797,382

LTM6300-SP can be packaged

in jars or cans.

0.18 0.16 (°Ccm²/W 0.14 0.12 0.10 Impedence 0.08 0.06 0.04 0.02 0.00 10 15 25 35 40 0 5 20 30 45 Pressure (PSI)

Thermal Impedance vs. Pressure

Thermal Impedance vs. Bond Line Thickness



Thermal Impedance Post Reliability



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