

UniPhase 4000-COB

Silicon Free - Phase Change Interface Material

UniPhase 4000-COB is a non silicon, high performance, phase changing thermal interface material, formulated to function as a superb alternative to messy and inconsistent thermal grease. Supplied as custom cut parts or in sheets, UniPhase 4000-COB will flow at a phase change temperature of 50°C and conform to the differing surface textures between a heatsink and LED COB or other device. In combination with device mounting pressure and phase change flow, UniPhase 4000-COB expels air voids at the interface helping to reduce thermal resistance.



Features

- Silicon Free with Low thermal resistance
- Highly reliable and consistent thermal interface for demanding applications such as LED COB
- Non-reinforced film

Availability

- Supplied in custom die-cut preforms and pads on sheets or rolls
- Available in a variety of thicknesses to suit individual application requirements

Physical Properties (for a typical thickness)

Property (unit)	Test Method	UniPhase 4000-COB
Thickness (mm)	Visual	0.127
Max Operating Temp.(°C)	In House	125
Thermal Conductivity (W/mK)	ASTM D5470	4.0
Thermal Impedance @ 20 psi (°C-cm ² /W)	ASTM D5470	0.10

Benefits

- Increases the lifetime of LED COB modules by effectively reducing chip temperature
- Delivers a consistent and reliable thermal interface
- Mounting pressures and phase change flow expels air between uneven surfaces reducing thermal impedance
- Delivers a thin bond line between surfaces helping to improve thermal performance


Recommended Uses



- Highly suitable for LED COB modules
- Typically used to thermally connect an electrically isolated heat generating component to a heatsink
- Within an application to replace thermal grease
- Power supplies and power modules

Mechanical and Electrical Properties

Property (unit)	Test Method	UniPhase 4000-COB
Volume Resistivity (Ω-cm)	ASTM D257	3.0 x 10 ⁻¹²
Density	ASTM D149	2.87 g/cc



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This material is often used in these industries:



Lighting



Consumer Electronics



Computing