

Product Description

LUMOTRIX HG1 Thermal Grease is a non-silicone based thermal grease. **HG1** exhibits a very thin bond line, has high thermal conductivity, and can be removed with either water or typical paint thinner. Typical thermal greases are extremely difficult to clean off parts, hands and clothing; LUMOTRIX HG1 cleans up easily.

Product Features & Benefits

LUMOTRIX HG1 Thermal Grease is non-silicone based, non-reactive, and non-abrasive with a soft, grease-like consistency with a tendency to flow and spread on a surface (Newtonian flow). It has excellent dielectric properties and a thermal performance better than standard heat sink compounds on the market. After application it becomes slightly gummy and therefore will not pump out of the heat sink interface, but it remains soft and will not cause thermal stress.

Major Applications

LUMOTRIX HG1 Thermal Grease is designed for thermal coupling of COB LEDs to heat sinks. It is applied on the ceramic rear surface of the LED which is then pressed onto a very flat precision machined sheet copper or aluminium heat sink surface. A saw-cut surface is **not** flat enough. It is supplied in a calibrated syringe containing 0.5 cm³ of grease, which will provide 10 doses of 0.05cm³. This recommended dose is double the bare minimum needed for a 24 x 20mm LED, so some will squeeze out the sides when the LED is pressed down onto the heat sink.

Typical Properties

<u>Property</u>	<u>Value</u>	<u>Test Method</u>
Consistency (Penetration, worked, 60x)	400	ASTM D-217
Specific Gravity , @ 25°C	2.5	ASTM D-70
Bleed , @ 150°C, 24 Hrs., %/Wt	0.0	FTM-321 MODIFIED
Evaporation , @ 150°C, 24 Hrs., %/Wt.	1.0	FTM-321 MODIFIED
Thermal Conductivity , @ 36°C W/m-K	1.1	ASTM D-5470-06
Anticipated Minimum Bond line (µm) Based on filler dimensions	5 µm - in practice <40 µm	
Electrical Properties		
Dielectric strength, 0.125mm gap, V/mm	10,500	ASTM D-149
Dielectric constant, 25°C @ 1,000 Hz	5.02	ASTM D-150
Dissipation factor, 25°C @ 1,000 Hz	0.0022	ASTM D-150
Volume Resistivity, ohm-cm	2.0 X 10 ¹⁵	ASTM D-257
Operating Temperature Range	-40°C to 180°C	
Appearance	Smooth White Paste	

Oakendene Estate, Cowfold, West Sussex, RH13 8AZ United Kingdom
 +44 1404 865914. e-mail sales@lumotrix.com. web <http://www.lumotrix.com>