



GCS-050 Graphite Heat Spreader

GCS-050 is a high performance, graphite heat spreader.

Features

- Engineered in-plane thermal conductivity 1300 W/m-K
- EMI shielding and absorbing to protect sensitive electronic parts
- Reliable performance from -400C to 4000C
- RoHS compliant and UL94V0 flammability rated
- Can be die-cut into customisable shapes
- Can be adhesive-backed for peel and stick attachment
- Can be laminated with plastics, metals or foam to improve performance
- Reduce skin temperature and eliminate 'hot spots'
- Can replace grease or PCM, eliminating fans and heat pipes



Configurations

Part number	Front face	Rear face	Structure	Total thickness	Heat Resistance	Features
GCS-050-G	-	-	1. GCS heat spreader	50um	400°C	• High thermal conductivity • High flexibility • Low thermal resistance • Available up to 400°C • Conductive material
GCS-050-A10	-	Insulate adhesion type 10um	1. GCS heat spreader 2. Adhesive tape 10hm 3. Release liner	60um	100°C	• Insulation material on one side • Low thermal resistance • Withstands voltage of 1kV
GCS-050-P10A10	Polyester tape standard type 10 um	Insulate adhesion type 10um	1. Polyester tape 10um 2. GCS heat spreader 3. Adhesive tape 10um 4. Release liner	70um	100°C	• Insulation material on both sides • Withstands voltage PET tape: 1.95kV • Low thermal resistance

Properties

CHARACTERISTIC	TEST METHOD	VALUE
Colour	Visual	Silver Grey
Thickness (mm)	-	0.050
Density (g/cm ³)	-	1.70
Typical Thermal Conductivity (in-plane) (W/m-K)	-	1300
Typical thermal conductivity (through thickness) (W/m-K)	-	20
Thermal diffusivity (cm ² /s)	-	8~10
Tensile strength, (MPa)	-	20
Electrical conductivity, (S/cm)	-	20000
CTE (coefficient of thermal expansion) (1/K)	-	9.3 x 10 ⁻⁷
Operating temperature (°C)	-	-40 ~ +400
Specific heat (@50oC J/kg-oC)	-	850



info@gcsthermal.com

GCS UK Ltd

7 Priory Business Park
Kibworth, Leicestershire
LE8 0RX, UK