

# LST-GBC-050-CU Graphite Bond Copper

## DESCRIPTION

LST-GBC-050-CU Graphite Bond Copper series is a high thermal conductivity, excellent flexibility and high crystallized graphite material. It is made from carbon material by a special process bonded with Copper. It can be die-cut into any shape and size to provide thermal heat management solution for limited space application.



Graphite Bond Copper Material

### Features

- Thermal Conductivity 1,300 W/m-K
- Good EMI Shielding and Absorbing
- Reliable Temperature -40°C to 400°C
- RoHS Compliant and UL94V0 Rated
- Offered Customized Combination Thickness

### Benefits

- Die-cut into customizable shapes
- Able to have adhesive-backed for peel-and-stick
- Laminate with plastic, metals or foam
- Reduce skin temperature and eliminate "hot spots"
- Can replace grease, eliminate fans and heat pipes.

## LST-GBC-050-CU Characteristics

Typical Properties	GTM	COPPER
Color	Silver Gray	Nature
Thickness (mm)	0.050	0.009
Density (g/cm <sup>3</sup> )	1.70	-
Thermal Conductivity (X-Y Direction), (W/m-K)	1,300	400
Thermal Conductivity (Z Direction), (W/m-K)	20	-
Thermal Diffusivity (cm <sup>2</sup> /s)	8 ~ 10	-
Tensile Strength (Mpa)	20	-
Electrical Conductivity (S/cm)	20,000	-
CTE (Coefficient of Thermal Expansion) (1/K)	9.3 X 10 <sup>-7</sup>	-
Operating Temperature (°C)	-40 ~ +400	-
Specific Heat @50°C (J/kg-°C)	850	-
RoHS Compliant	Yes	-

## Part-Order Ordering System :

LST-GBC-050-P10 G A10-CU-A10

① ② ③ ④

① **P10** : P= PET (Not To Remove)  
10 = Thk 10 or 30u

② **G** : Graphite Material Composite  
Position

③ **A10** : A= Adhesive  
10= Thk 10 or 30u

**CU** : Copper Foil Bond

④ **A10** : A= Adhesive  
10= Thk 10 or 30u

Note: Above properties listed information are typical or representative only.

## GRAPHITE BOND COPPER MATERIAL CONFIGURATIONS AVAILABLE:

Structure		GTM Bond	Adhesive Type				Laminated Type (Insulation & Adhesive)			
Layer	Type		Non AC	Single AC	Double AC		P30-A30	P30-A10	P10-A30	P10-A10
I	Liner				Release	Release	Laminated Insulation (Polyester Tape / Insulative Adhesion Tape) (Do Not Remove)			
II	Front Surface				10u	30u				
III	Graphite	Graphite Thermal Material 50u (0.050mm)								
IV	Bond Surface	Bonding Insulative Thickness = 10u								
V	Bond Material	BM Thickness = Copper (CU) 0.009mm or As Required								
VI	Rear Surface		30u	10u	30u	10u	30u	10u	30u	10u
VII	Release Liner		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Structure Layer		3	5	5	7	7	7	7	7	7
Total Thickness		60u+BM	90u+BM	70u+BM	100u+BM	100u+BM	120u+BM	100u+BM	100u+BM	80u+BM
Heat resistance		100 °C	100 °C	100 °C	100 °C	100 °C	100 °C	100 °C	100 °C	100 °C

NOTICE: information contained herein are based on our best knowledge and accurate. However, before using, user shall determine, the suitability of the product for its intended use, and the user assumes all risks and liability whatsoever in connection therewith.

## LISAT

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