



# XL-25 Ceramic Heat Spreader

REACH Compliant    RoHS Compliant

## Features

- Open-porous structure increases air contact area
- Best for limited space
- High breakdown voltage, high resistance
- Low thermal expansion coefficient
- EMI reduction
- High reliability

## Applications

Can adapt to dramatic environmental changes

Electronic components - Electric Vehicles, 5G, Autopilot System, Mobile Phone, AIOT, HPC (High Performance Computing), Server, IC, CPU, MOS, LED, Mother Board, Power Supply, Heat Sink, LCD-TV, Notebook, PC, Telecom Device, Wireless Hub, DDR II Module, etc.

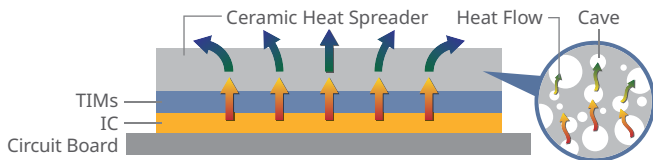
## Standard Sizes (mm)

01. 10x10x2.0(flat)	07. 22x22x2.5(flat)	13. 40x40x3.0(embossed)
02. 15x15x2.5(flat)	08. 30x30x2.0(flat)	14. 40x40x5.0(fin)
03. 15x15x5.0(fin)	09. 30x30x2.5(flat)	15. 40x40x10.0(fin)
04. 20x15x2.0(flat)	10. 30x30x5.0(fin)	16. 50x50x3.0(embossed)
05. 20x20x2.0(flat)	11. 35x35x10.0(fin)	17. 50x50x5.0(fin)
06. 20x20x2.5(flat)	12. 40x40x2.5(flat)	18. 50x50x10.0(fin)

## Mechanism

$$A_{ca} \cong 5 \times A_{al}$$

The air-contact area of ceramic heat spreader is nearly 5 times of aluminum heat sink, when they have the same volume. In the same air flow, ceramic heat spreader can provide more air-contact area. When A is bigger,  $Q_t$  would be bigger,  $Q_t$  would be bigger.



$$Q_t \propto S \times A$$

$Q_t$ : The heat would be taken by air flow.

S: Air flow(m/s)                      A: Air contact area (m<sup>2</sup>)

$A_{ca}$ : Air contact (m<sup>2</sup>) of ceramic heat sink

$A_{al}$ : Air contact (m<sup>2</sup>) of aluminium heat sink

## Properties

Properties	XL-25	Unit	Tolerance	Test Method
Thermal Conductivity	10	W/mK	±0.67	-
Colour	Grey/Green	-	-	Visual
Dielectric Breakdown Voltage	500	Voltage	-	ASTM D149
Bulk Density	1.89	g/cm <sup>3</sup>	±0.18	CNS 619
Flexural Strength	47.5	kgf/cm <sup>2</sup>	-	CNS 12701
Porosity	25	%	-	CNS 619
Water absorption	16	%	-	CNS 619
Working Temperature	<500	°C	-	-
Linear Temperature Expansion Coefficient	4.13	10 <sup>-6</sup>	-	RT~300° C
Main Composition	SiC/Al <sub>2</sub> O <sub>3</sub> /SiO <sub>2</sub>	-	-	-
Hardness	5~6	Moh's	±0.6	DIN En101-1992

## T-Global Technology (Europe & North America) Limited

Units 1-2 Cosford Business Park, Central Park, Lutterworth, Leicestershire, LE17 4QU, United Kingdom

T +44 (0)1455 553 510    E sales@tglobaltechnology.com    W www.tglobaltechnology.com

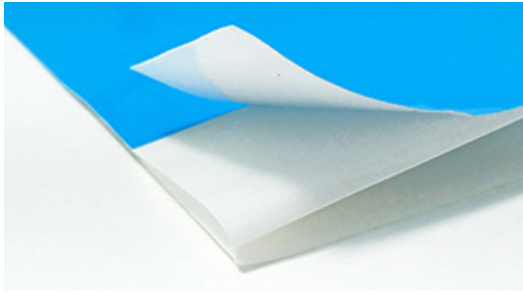
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# TG-T1000 Thermal Tape

REACH Compliant RoHS Compliant

## Features

- Good adhesion
- Great reliability
- Cost effective with great performance
- Easy to assemble
- Customization services for different industries

## Applications

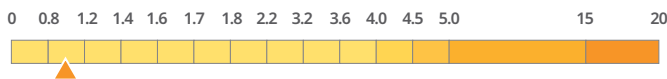
Electronic components - Electric Vehicles, 5G, Autopilot System, Mobile Phone, AIOT, HPC (High Performance Computing), Server, IC, CPU, MOS, LED, Mother Board, Power Supply, Heat Sink, LCD-TV, Notebook, PC, Telecom Device, Wireless Hub, DDR II Module, etc.

## Storage

T-global guarantees a 6 month shelf life at maximum continuous storage. Storage temperature should under 25°C to maintain controlled adhesion to the liner.

## Properties

### Thermal Conductivity : 1 W/mK



Properties	TG-T1000			Unit	Tolerance	Test Method
Thermal Conductivity	1	1	1	W/mK	±10%	ASTM D5470
Thickness	0.15	0.25	0.5	mm	-	ASTM D374
Colour	White			-	-	Visual
Reinforcement Carrier	Fiberglass mesh			-	-	-
Continuous Working Temperature	-30~120			° C	-	-
Short time use temperature (30sec)	180			° C	-	-
Density	1.2			g/cm <sup>3</sup>	-	ASTM D792
Initial Tack	19	11	5	cm	-	PSTC-6
Holding Power 1000g@25° C using 1 in <sup>2</sup>	>3000			min	-	PSTC-7
180° Peeling Strength (aluminum)	>14	>16	>19	N / 25mm	-	PSTC-101
Dielectric Breakdown Voltage (AC)	2	3	5	KV	±10%	ASTM D149
Thermal Impedance@10psi	0.93	1.26	1.6	° C-in <sup>2</sup> / W	-	ASTM D5470
Thermal Impedance@30psi	0.76	1.06	1.33	° C-in <sup>2</sup> / W	-	ASTM D5470
Thermal Impedance@50psi	0.61	1.05	1.19	° C-in <sup>2</sup> / W	-	ASTM D5470

Pre-cut for different shapes

Roll type is available

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