

# 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.

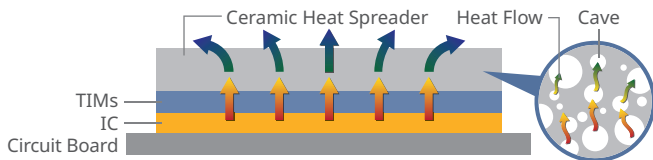
## Standard Sizes (mm)

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

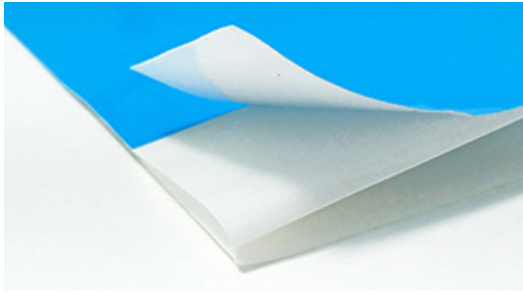
Version17  
20200501



T-Global Technology are proud to announce the launch of a new company logo and mission statement as part of the ongoing growth and evolution of our company's brand.

**NOTICE:** The information contained herein is to the best of our knowledge true and accurate. Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. All specifications are subject to change without notice. The protective film does not affect the function of the product. If there is no special requirement, the default depends on T-Global. Since the varied conditions of potential use are beyond our control, all recommendations or suggestions are presented without guarantee or responsibility on our part and users should make their own test to determine the suitability of our products in any specific situation. This product is sold without warranty either expressed or implied, of fitness for a particular purpose or otherwise, except that this product shall be of standard quality, and except to the extent otherwise stated in T-Global Technology's invoice, quotation, or order acknowledgment.

We disclaim any and all liabilities incurred in connection with the use of information contained herein, or otherwise. All risks of such are assumed by the user. Furthermore, nothing contained herein shall be construed as a recommendation to use any process or to manufacture or to use any product in conflict with existing or future patents covering any product or material or its use.



# 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

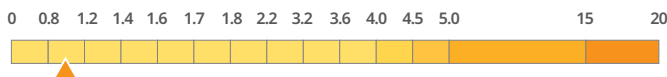
Electronic components - Electric Vehicles, 5G, Autopilot System, Mobile Phone, AIOT, HPC (High Performance Computing), Server, IC, CPU, MOS, LED, Mother Board, Power Supply, Heat Sink, LCD-TV, Notebook, PC, Telecom Device, Wireless Hub, DDR II Module, etc.

## 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

## 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

Version17  
20200716



T-Global Technology are proud to announce the launch of a new company logo and mission statement as part of the ongoing growth and evolution of our company's brand.

NOTICE: The information contained herein is to the best of our knowledge true and accurate. Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. All specifications are subject to change without notice. The protective film does not affect the function of the product. If there is no special requirement, the default depends on T-Global. Since the varied conditions of potential use are beyond our control, all recommendations or suggestions are presented without guarantee or responsibility on our part and users should make their own test to determine the suitability of our products in any specific situation. This product is sold without warranty either expressed or implied, of fitness for a particular purpose or otherwise, except that this product shall be of standard quality, and except to the extent otherwise stated in T-Global Technology's invoice, quotation, or order acknowledgment. We disclaim any and all liabilities incurred in connection with the use of information contained herein, or otherwise. All risks of such are assumed by the user. Furthermore, nothing contained herein shall be construed as a recommendation to use any process or to manufacture or to use any product in conflict with existing or future patents covering any product or material or its use.