

# 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.

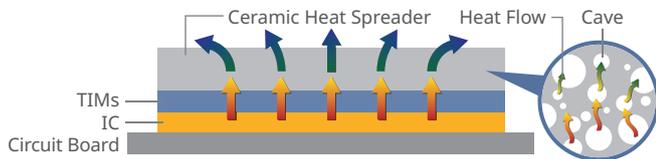
## Standard Sizes (mm)

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

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