



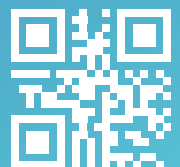
PRODUCT BROCHURE

Thermal Simulation
Vapor Chambers
Heat Pipes
Thermal Interface Materials
Heat Sinks
Thermoelectric Cooling Chips
Flexible Absorbent Materials
Fans

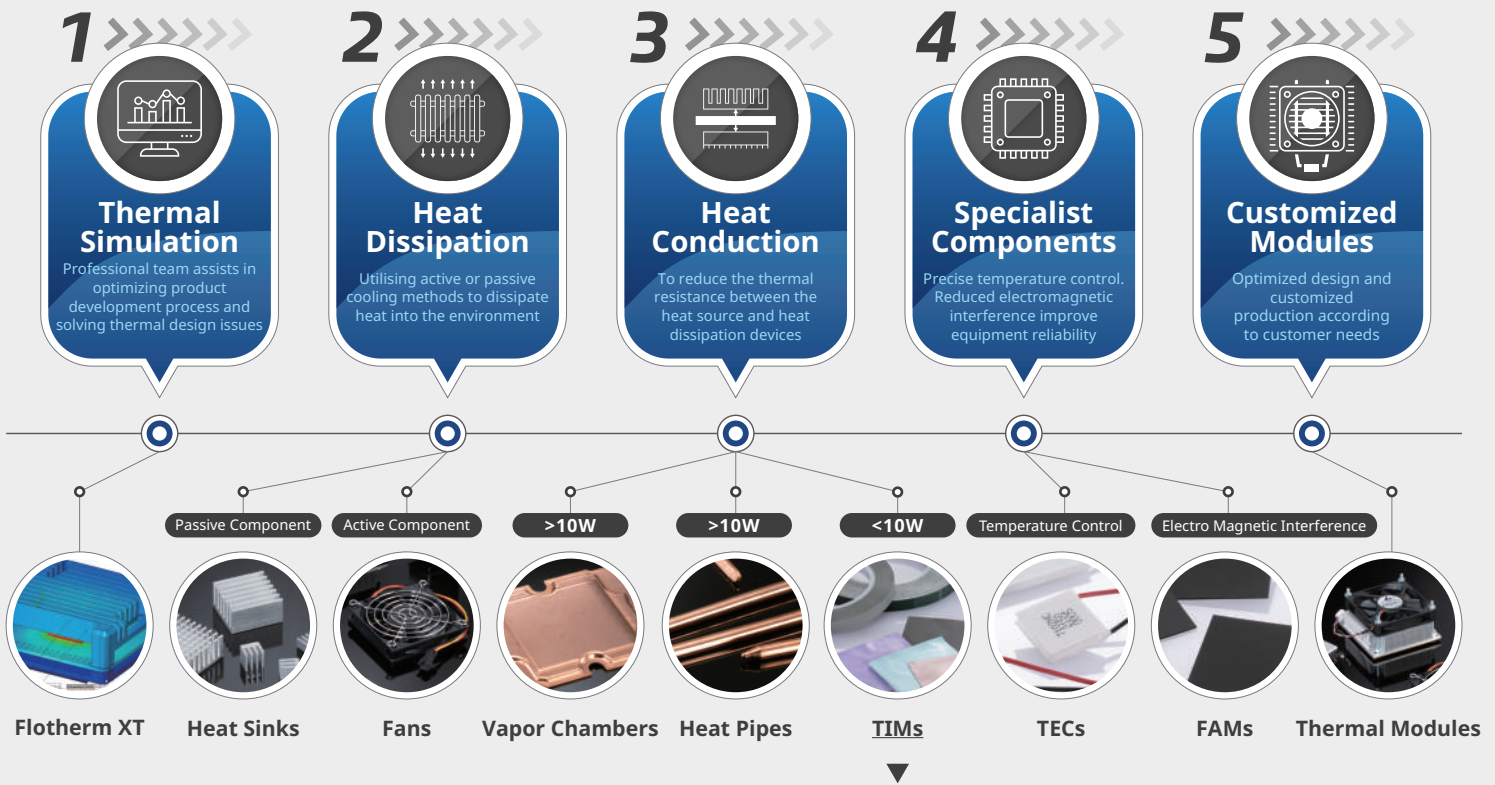
Stay Cool. Bridge Innovation.



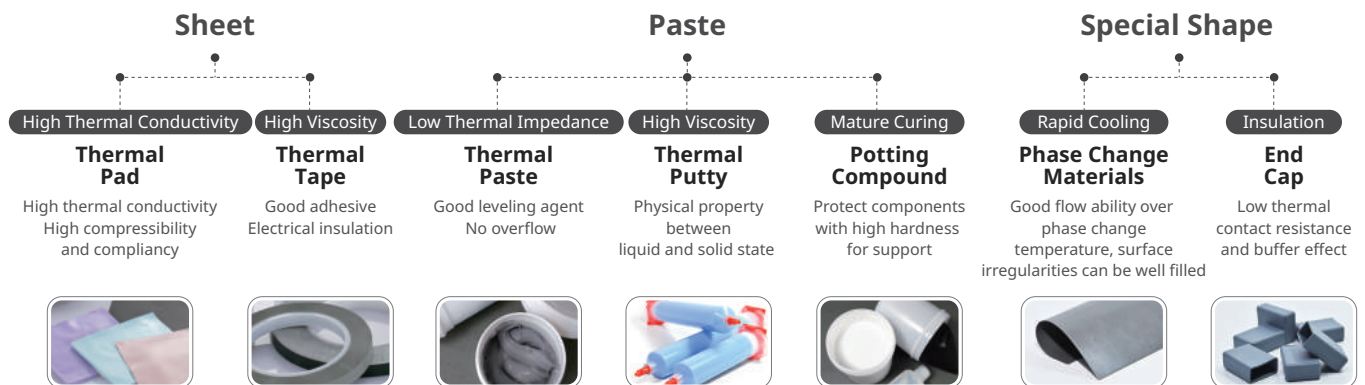
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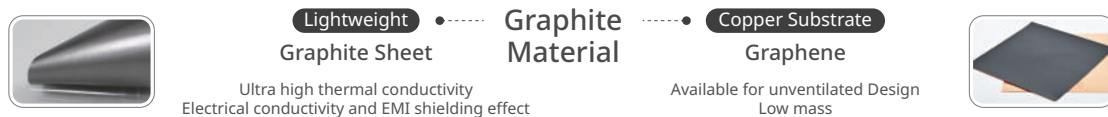
Which product is most suitable for you?



Z Axis Heat Conduction



XY Axis Heat Conduction



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 and release paper do 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.

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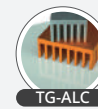
Reinforcement
Carrier



Fiberglass Mesh

Strength Enhancement

• TG-A20KF • TG-A38KF
• TG-A3500F • TG-A4500F • TG-A6200F



Low Cohesion

Easy Installation

• TG-A6200LC • TG-A1250LC

SELECTION GUIDE

Auxiliary
Material

• Industrial Grade Functional Tape

Single/Double-Sided Tape, Conductive Tape, Masking Tape...
(Brands used: NOMEK • Kapton • 3M • TESA • NITTO • DIC • TERAOKA • SONY • Hi-Bon • SEKISUI...)

• Foaming Buffer Material

Foam/UL Foam/Conductive Foam...

• PET Release/Protective Film

Black/White/Transparent Mylar, Electrostatic Film...

• Aluminum Foil, Copper Foil, FR4, Teflon, Nylon...

TG-A series High Performance Thermal Pad

High thermal conductivity. High compressibility and compliency. Electrical insulation. Natural tack.



Properties	Unit	TG-A20KX	TG-A2200	TG-A3500	TG-A38KX	TG-A4500	TG-A6200	TG-A9000	TG-A1250	TG-A1450	TG-A1660	TG-A1780	Test Method
Thermal Conductivity	W/m-K	2.0	2.2	3.5	3.8	4.5	6.2	9.0	12.5	14.5	16.6	17.8	ASTM D5470 Modified
Thickness	mm	0.3~10.0	0.5~2.0	0.5~8.0	0.3~10.0	0.5~8.0	0.5~8.0	0.5~8.0	0.5~8.0	0.5~8.0	0.5~8.0	0.5~8.0	ASTM D374
Color	-	Dark Gray	Gray	Yellow	Blue	Purple	Blue	Pink	Green	Pink	Dark Gray	Light Gray	Colorimeter CIE 1976
Flame Rating	-	V-0	V-1	V-0	V-0	V-0	V-0	V-0	V-0	V-0	V-0	V-0	UL94
Dielectric Breakdown Voltage	kV/mm	≥12	≥13	≥13	≥10	≥10	≥10	≥8	≥10	≥8	≥7	≥8	ASTM D149
Weight Loss	%	<1											By T-Global
Density	g/cm ³	2.0	2.7	2.3	3.1	3.1	3.1	3.2	3.3	3.6	3.6	3.5	ASTM D792
Operating Temperature	°C	-40~+180	-40~+180	-50~+180	-40~+200	-50~+180	-50~+180	-50~+180	-50~+180	-50~+180	-50~+180	-50~+180	-
Volume Resistivity	Ohm·m	3x10 ¹²	3x10 ¹²	8x10 ¹²	3x10 ¹²	1x10 ¹³	1x10 ¹³	1x10 ¹²	1x10 ¹³	7x10 ¹²	5x10 ¹²	6x10 ¹²	ASTM D257
Elongation	%	160	55	80	110	50	50	40	40	30	20	20	ASTM D412
Standard Format	-	Sheet											-
Hardness	Shore OO	55	15	35	60	50	50	50	55	55	65	70	ASTM D2240

TG-AD Series Ultra Soft Thermal Pad

High thermal conductivity. Low thermal impedance.
Good electrical insulation.



Properties	Unit	TG-AD30	TG-AD66	TG-AD75	Test Method
Thermal Conductivity	W/m-K	3.0	6.5	7.5	ASTM D5470 Modified
Thickness	mm	1.0~10	1.0~10	1.0~8.0	ASTM D374
Color	-	Purple	Green	Gray	Colorimeter CIE 1976
Flame Rating	-	V-0			UL94
Dielectric Breakdown Voltage	kV/mm	≥5	≥4	≥5	ASTM D149
Weight Loss	%	<1			By T-Global
Density	g/cm ³	3.05	3.3	3.2	ASTM D792
Operating Temperature	°C	-50~+150			-
Volume Resistivity	Ohm·m	10 ¹²			ASTM D257
Tensile Strength @T3.0mm	kgf/cm ²	≥50	≥6	≥3	ASTM D257
Elongation	%	≥350	10	≥20	ASTM D412
Standard Format	-	Sheet			-
Hardness	Shore OO	20	25	25	ASTM D2240

TG-AL series Low Bleed Thermal Pad

Low bleed. High compressibility. Self-adhesive.



Properties	Unit	TG-A1800L	TG-A3200L	TG-A5000L	Test Method
Thermal Conductivity	W/m-K	1.8	3.2	5.0	ASTM D5470 Modified
Thickness	mm	0.5~8.0			ASTM D374
Color	-	Pink	Light Gray	Yellow	Colorimeter CIE 1976
Flame Rating	-	V-0			UL94
Dielectric Breakdown Voltage	kV/mm	≥7	≥6	≥6	ASTM D149
Weight Loss	%	<1			By T-Global
Density	g/cm ³	2.6	3.0	3.4	ASTM D792
Operating Temperature	°C	-50~+150			-
Volume Resistivity	Ohm·m	10 ¹³	10 ¹³	10 ¹²	ASTM D257
Bleeding Width	mm	<3			ASTM D257
Tensile Strength @T3.0mm	kgf/cm ²	20	≥20	-	ASTM D412
Elongation	%	140	≥120	90	ASTM D412
Standard Format	-	Sheet			-
Hardness	Shore OO	35			ASTM D2240

TG-APC series Non-Silicone Thermal Pad

Non-Silicone and no oil bleed.
Suitable for use with sensitive electronic components.



Properties	Unit	TG-APC93	TG-APC94	Test Method
Thermal Conductivity	W/m-K	2.1	4.2	ASTM D5470 Modified
Thickness	mm	0.5~5.0		ASTM D374
Color	-	Gray	Red	Colorimeter CIE 1976
Flame Rating	-	V-0		UL94
Dielectric Breakdown Voltage	kV/mm	≥10.2		ASTM D149
Weight Loss	%	<1		By T-Global
Density	g/cm ³	2.1	2.5	ASTM D792
Operating Temperature	°C	-30~+125		-
Volume Resistivity	Ohm·m	>10 ¹⁰		ASTM D257
Elongation	%	350	100	ASTM D412
Tensile Strength	kgf/cm ²	1	2	ASTM D412
Standard Format	-	Sheet		-
Hardness	Shore OO	55	50	ASTM D2240

TG-T1000 series Thermal Tape

Good adhesion. Easy to assemble.
Customization services for different industries.



Properties	Unit	TG-T1000		TG-T1000T	Test Method
Thermal Conductivity	W/m-K	1		1.3	ASTM D5470 Modified
Thickness	mm	0.15	0.25	0.11	ASTM D374
Color	-	White		Gray	Colorimeter CIE 1976
Reinforcement Carrier	-	Fiberglass Mesh		PET	-
Operating Temperature	°C	-30~+120		-40~+120	-
Short Time Use Temperature (30sec)	°C	180		200	-
Density	g/cm ³	1.2		1.5	ASTM D792
Initial Tack	cm	19	11	24	PSTC-6
Holding Power 1000g @25° Cusing 1in ²	min	>3000		>1000	PSTC-7
Peeling Strength 180° (Aluminum)	N/25mm	>14	>16	≥7 (ASTM D3330)	PSTC-101
Dielectric Breakdown Voltage (AC)	kV	≥3	≥6	≥4	ASTM D149
Thermal Impedance @10psi	°C*in ² / W	0.93	1.26	0.68	ASTM D5470 Modified
Thermal Impedance @30psi	°C*in ² / W	0.76	1.06	0.66	ASTM D5470 Modified
Thermal Impedance @50psi	°C*in ² / W	0.61	1.05	0.65	ASTM D5470 Modified

Thermal Paste

Good leveling agent. No overflow. Effectively fills gaps in the interface.



Properties	Unit	TG-AS808	TG-N909	TG-AS606B	TG-AS606C	Test Method
Thermal Conductivity	W/m-K	8.0	9.0	1.9	5.3	ASTM D5470 Modified
Color	-	Gray	Gray	White	Gray	-
Oil Dispersible	wt%	<0.1		<0.2	<0.05	24hrs@150°C
Weight Loss	wt%	<0.1		<0.5		By T-Global
Density	g/cm³	2.9	2.85	2.2	2.95	ASTM D792
Operating Temperature	°C	-40~+200		-40~+180		-
Viscosity	Pa-s	350	300	200	150	Brookfield Viscometer
Volume Resistivity	Ohm-m	>10 ¹³		>10 ¹¹	>10 ¹²	ASTM D257
Standard Package	-	Pot		Tube / Pot		-

Thermally Conductive Gel

Good thermal conductivity. Pistol friendly & easy assembly.
Cured by room temperature or heating.



Properties	Unit	TG-ASD35AB	Test Method
Thermal Conductivity	W/m-K	3.5	ISO 22007-2
Color	-	A:Pink / B:White	-
Dielectric Breakdown Voltage	kV/mm	7	ASTM D149
Weight Loss	%	<1	By T-Global
Volume Resistivity	Ohm-m	10 ¹⁴	ASTMD257
Density	g/cm³	3	ASTM D792
Operating Temperature	°C	-50~+150	-
Viscosity @1.0rpm	Pa-s	A:250 / B:250	ASTM D7395 ASTM D4287
Elongation	%	>100	ASTM D412
Tensile Strength @T3.0mm	kgf/cm²	10	-
Curing Time @25° C	min	120~240	-
Standard Package	-	Pot / Tube	-
Hardness	Shore OO	40	ASTM D2240
Mixing Ratio	gram	1:1	-

Graphene

Ultra thin, Available for unventilated design, No dusting issue



Properties	Unit	TG-P10050	TG-P10090	Test Method
Thermal Conductivity (XY axis)	W/m-K	1500~1800		AC Calorimeter
Thermal Conductivity (Z axis)	W/m-K	12		Laser Flash
Total Thickness	µm	50	90	Handheld Thickness Gauge
Copper Foil Thickness	µm	35	75	Handheld Thickness Gauge
Coating Thickness	µm	15		Handheld Thickness Gauge
Vertical Resistivity (XY axis)	Ohm-inch²	2.57		QJ1523-1988
Parallel Resistivity (Z axis)	Ohm-inch²	0.66		QJ1523-1988
Cross-Cut Tape Test	-	4B		ASTM D3359B
Pencil Hardness Test	-	2H		ASTM D3363
Solvent Resistance (Alcohol)	-	Pass (5 times)		ASTM D5402
Rubber Abrasive Test	-	Pass (150 times)		ASTM D7835
High Temperature & Humidity Test @85° C/85%RH	-	Pass (500 hrs)		IEC-60068-2-78
Thermal Shock Test @-20~+80°C	-	Pass (500 cycles)		IEC-60068-2-14
Operating Temperature	°C	-20~+120		ISO 16750-4

Thermal Putty

Low thermal resistance. Shapeable and compressible.



Properties	Unit	TG-N4000	TG-A7000	TG-N8000	Test Method
Thermal Conductivity	W/m-K	4.0	7.0	8.0	ASTM D5470 Modified
Color	-	Blue Purple	Green	Yellow	-
Viscosity	Pa-s	350	250	430	Brookfield Viscometer
Density	g/cm³	2.6	3.25	3.0	ASTM D792
Volume Resistivity	Ohm-m	≥10 ¹⁰	10 ¹³	>10 ¹⁰	ASTM D257
Operating Temperature	°C	-40~+125	-50~+180	-40~+125	-
Standard Package	-	Tube / Pot			-

Potting Compound

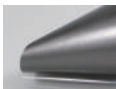
High stability. Heat curing.



Properties	Unit	TG-A720AB	TG-A730AB	TG-A96AB	TG-A09AB	Test Method
Thermal Conductivity	W/m-K	0.8	2.1	2.6	2.8	ASTM D5470 Modified
Color	-	White	Gray	White/Black	Gray(Mix)	-
Dielectric Breakdown Voltage	kV/mm	≥12	≥11	≥11	≥11	ASTM D149
Weight Loss	%	<1	-	<1	<1	By T-Global
Volume Resistivity	Ohm-m	-	1X10 ¹²	-	≥10 ¹²	ASTMD257
Density	g/cm³	1.97	2.3	2.5	2.52	ASTM D792
Operating Temperature	°C	-40~+180	-50~+200	-25~+150	-50~+150	-
Viscosity	Pa-s	2~10	6~12	1.8~2.5	10~50	Brookfield Viscometer
Curing Time @25° C	hr	18	3	12	6	-
Standard Package	-	Pot	Pot / Tube	Pot	Pot	-
Hardness	Shore	A 50	A 60	A 68	OO 90	ASTM D2240
Mixing Ratio	gram	100:2	1:1	13:1	1:1	-

Synthetic Graphite Sheet

Ultra high thermal conductivity, electrical conductivity and EMI shielding.



Properties	Unit	T68	Test Method
Thermal Conductivity (XY Axis)	W/m-K	1500	AC Calorimeter
Thermal Conductivity (Z Axis)	W/m-K	5	Laser Flash
Thickness	µm	25	Micrometer
Thermal Diffusivity	cm²/s	8.5	AC Calorimeter
Density	g/cm³	2.1	Archimedes Principle
Electrical Conductivity	S/cm	>13000	JIS K7194
Bending Test	times	10000	-
Operating Temperature	°C	-40~+400	AC Calorimeter
Specific Heat Capacity	J/g·K	0.895	-

Properties	T68	T68A	T68AP	T68APF
Structure	Graphite Sheet	Graphite Sheet	PET Tape	PET Tape
		2-Sided Adhesive Tape	Graphite Sheet	Graphite Sheet
		Release Paper	2-Sided Adhesive Tape	2-Sided Adhesive Tape
			Release Paper	Release Paper
Heat Resistant Temperature(°C)	400	100	80~100	80~100

※ Standard PET tape on the top (10µm/30µm) ※ Insulating 2-sided adhesive tape on the bottom (10µm/30µm)

Online Instant Calculator /

Fast Evaluation of Suitable Thermal Solutions



- ❑ Stuck with thermal testing?
- ❑ How much heat dissipation would my design need?
- ❑ Struggling with what thermal interface material or component to apply?

Save Time on Testing and Explore More Possibilities with our Thermal Solutions

STEPS

1

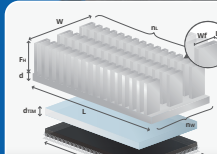
Enter Dissipation Mechanism Data

2

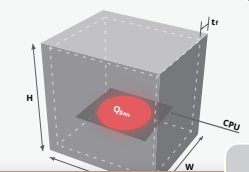
Receive Recommendation of Thermal Solution Products

3

Improve Design and Save Time and Money



Open System



Closed System



Heat Pipe



Vapor Chambers

10 times more efficient than heat pipes.

Different industries will require different specifications, please contact us directly for the most suitable specifications.



Step 1 | RFQ

Submission of technical requirement through T-Global website



Step 2 | Specification

Configuration of heat allocation, source area and power



Step 3 | Proposal

System analysis with solutions



Step 4 | Project Kick-off

Milestones per production plan

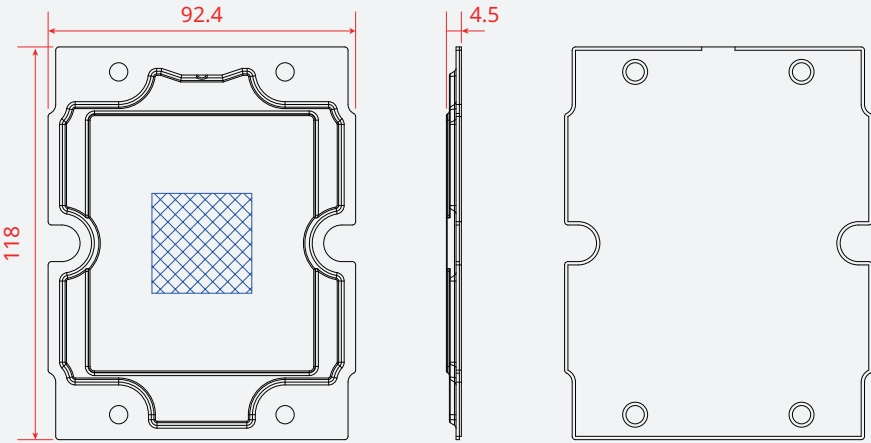
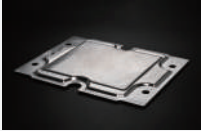
Design Guide

Q-Max Size (mm)	Thickness (mm)		
	2.0	3.0	4.0
60 X 80	50	70	90
90 X 90	80	120	160
100 X 100	140	200	260
120 X 80	130	200	250
180 X 150	160	250	300
200 X 120	200	300	400
350 X 100	220	350	450

AMD-1U

92.4 X 118 X 4.5 mm

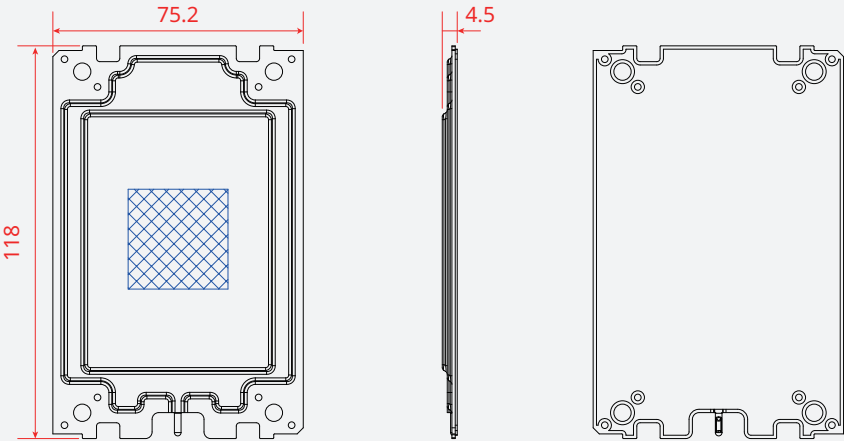
Material	CU1020
Surface finishing	anti-oxidation
Recommended Power	270W



Intel-1U

75.2 X 118 X 4.5 mm

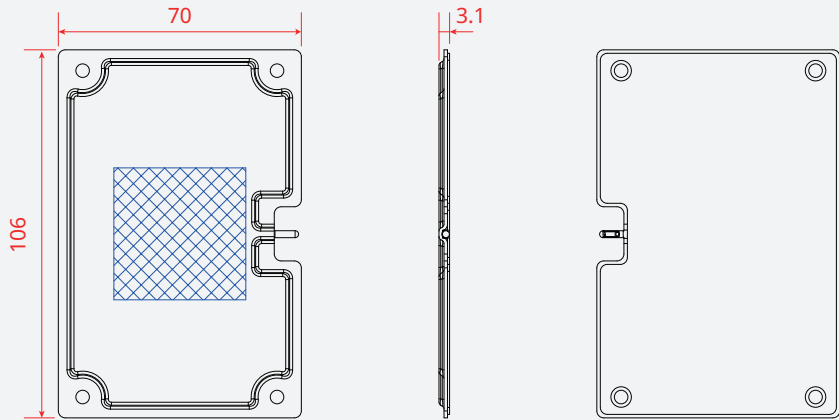
Material	CU1020
Surface finishing	anti-oxidation
Recommended Power	270W



EOS

70 X 106 X 3.1 mm

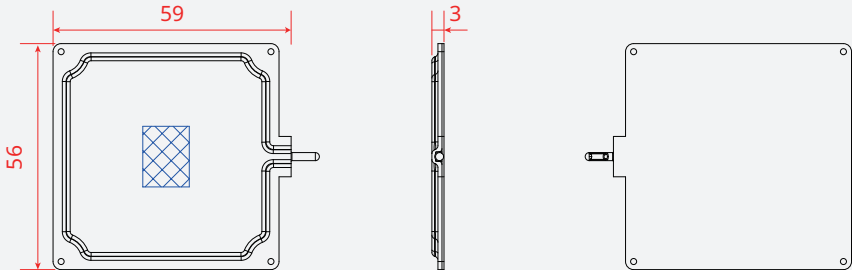
Material	CU1020
Surface finishing	anti-oxidation
Recommended Power	150W



OB

59 X 56 X 3 mm

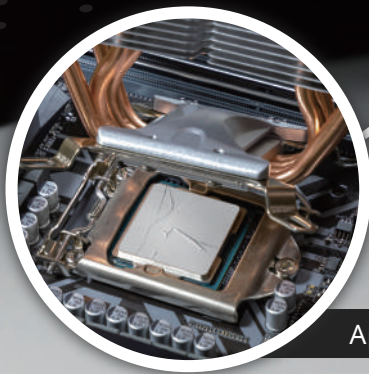
Material	CU1020
Surface finishing	anti-oxidation
Recommended Power	150W



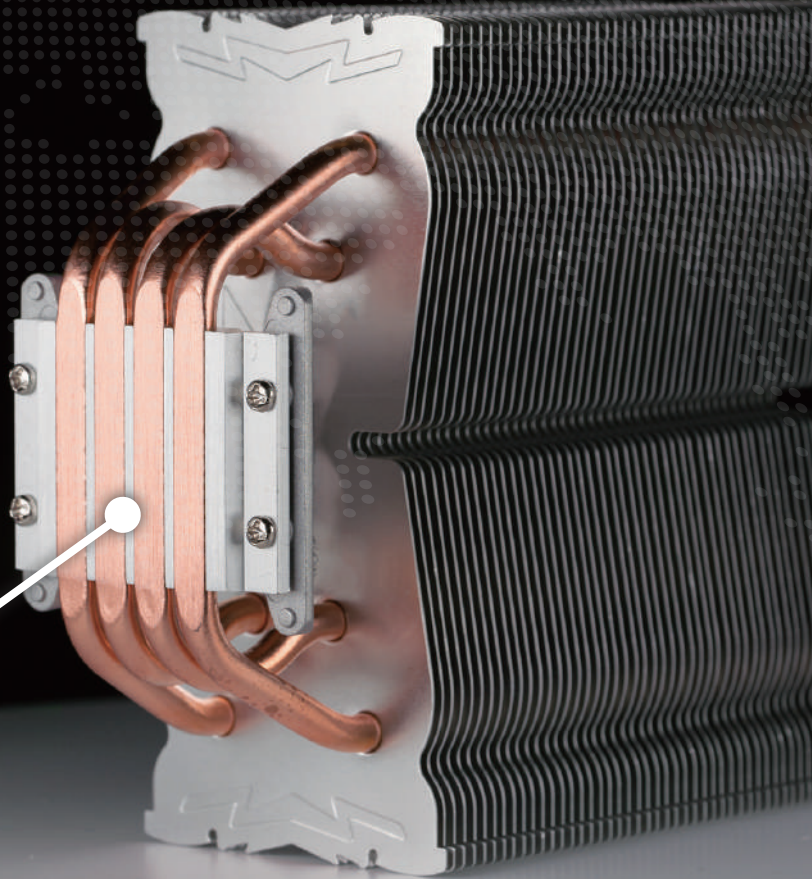
Custom Integrated Solutions

THERMAL MODULE

- ✓ Customization
- ✓ High-efficiency cooling technology
- ✓ Professional consulting services



Apply with T-Global's Thermal Interface Materials



Heat dissipation modules are composed of two elements: heat conduction and heat dissipation components. Both are essential for effective heat dissipation. The conduction component transfers heat to a specific area, where the dissipation component then carries the heat through a heat sink and releases it into the environment via the principles of convection.

AMD SP3/6 Server 2U CPU Heatsink

79 X 118 X 64 mm

Fin: AL1050 | Base: AL6061 | Block: CU1100 | Heat Pipe: Ø6*4PCS

Heat Source Dimension : 67.9 X 51mm

Power Input : 225W

Flow Rate : 10~40 CFM

Socket type : LGA 4844



Power (W)	CFM	T _{case}	T _{amb}	Resistance
225	10	72.5	23.6	0.218
	15	61.7	23.8	0.169
	20	56.9	24.0	0.146
	25	53.4	23.9	0.131
	30	51.6	24.2	0.122
	35	50.4	24.7	0.114
	40	49.5	25.1	0.108

Intel BHS 2U SP Server 2U CPU Heatsink

118 X 72 X 64 mm

Fin: AL1050 | Base: AL6061 | Block: CU1100 | Heat Pipe: Ø6*5PCS

Heat Source Dimension : 50 X 70mm

Power Input : 350W

Flow Rate : 20~60 CFM

Socket type : LGA 4710



Power (W)	CFM	T _{case}	T _{amb}	Resistance
350	20	74.2	26.1	0.137
	30	64.8	26.3	0.110
	40	60.2	26.7	0.096
	50	57.2	26.8	0.087
	60	55.2	26.9	0.081