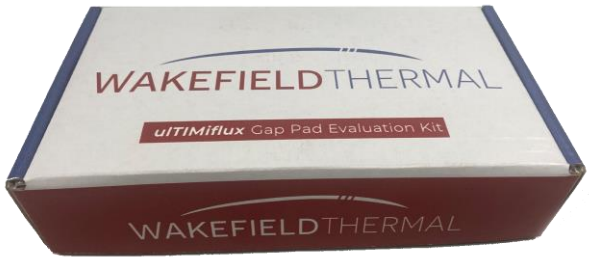
PLK-129345

WAKEFIELDTHERMAL

Selection Guide

Technical Data Sheet

UlTIMiFlux demonstration kit includes a quantity 1 of the 9 different TIMs as listed below to evaluate in your application. Thermal pads are used for filling the voids between a heat source and heat sink, effectively excluding air from the contact interface. The products are ultra soft, naturally tacky and can be die-cut into various shapes. PLF is a silicone free TIM.



Wakefield Thermal			www.wakefieldthermal.com		
Wakefield Part #	**Colors**	**Performance**	**Shore 00**	**Thickness**	**Size**
PL-1-1.5-76X127-15	Blueish Gray	1.5 W/mk	15	1 mm	3" X 5"
PL-1-3-76X127-30	Blue	3 W/mk	30	1mm	3" X 5"
PL-1-5-76X127-60	Brown	5 W/mk	60	1mm	3" X 5"
PL-1-6-76X127-60	Gray	6 W/mk	60	1mm	3" X 5"
PL-1-8-76X127-50	Gray	8 W/mk	50	1mm	3" X 5"
PL-1-10-76X127-55	Gray	10 W/mk	55	1mm	3" X 5"
PL-1-12-76X127-75	Gray	12 W/mk	55 - 75	1mm	3" X 5"
PL-1-14-76X127-65	Purple	14 W/mk	65	1mm	3" X 5"
PLF-1-8-76X127-70	Light Gray	8 W/mk	70	1mm	3" X 5"

Product Example Image

Features And Benefits

- Wide operating temperature range
- Excellent flame retardance
- Good electrical insulation performance
- Good flexibility and high compression ratio

Applications

- Semiconductor heat sink
- Thermal imaging equipment
- Military electronic products
- Vehicle navigation equipment
- Communication & power equipment
- Graphics card, memory module
- LED lighting equipment
- HDTVs

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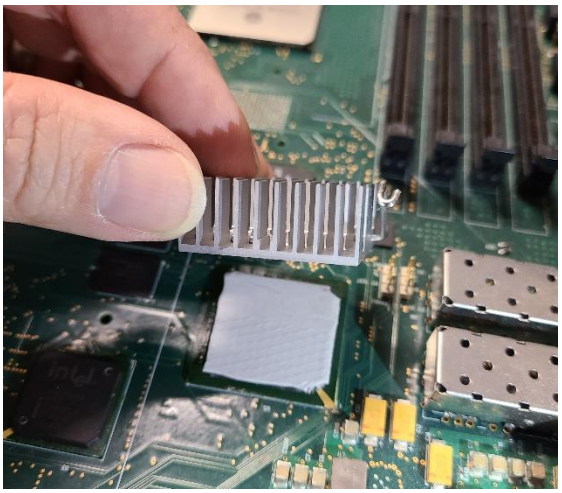
* Test fixtures using ASTM D5470. Recorded values include interface thermal resistance. These values are for reference only. The actual application performance is directly related to the applied surface roughness, flatness and pressure.

Technical Data Sheet

Product Description

Thermal pads are used for filling the voids between a heat source and heat sink, effectively excluding air from the contact interface. The products are ultra soft, naturally tacky and can be die-cut into various shapes.

Illustration example



PL-1-1.5-76X127-15		
Color	Blueish Gray	visual
Thickness	0.15-15.0mm	ASTM D374
Specific Gravity	2.1g/cc	ASTM D792
Thermal Conductivity	1.5 W/m-K	ASTM D5470
Hardness (Shore OO)	15	ASTM D2240
Elongation	50%	ASTM D412
Tensile Strength	50psi	ASTM D412
Breakdown Voltage AC(KV)	＞2@0.5MM ＞4@0.75MM	ASTM D149
UL Flammability Rating	UL94	V-0
Volume Resistivity	$1*10^{13}\Omega.cm$	ASTM D257
Operating Temperature	-50～200℃	——
Thermal Impedance (1mm,@40psi)	$0.9℃*in^2/W$	ASTM D5470 *
Compression Ratio(1mm,@40psi)	50%	——
Dielectric Constant MHz	5.5	ASTM D150
RoHS	PASS	IEC 62321
Halogen	PASS	EN14582
REACH	PASS	EN14372

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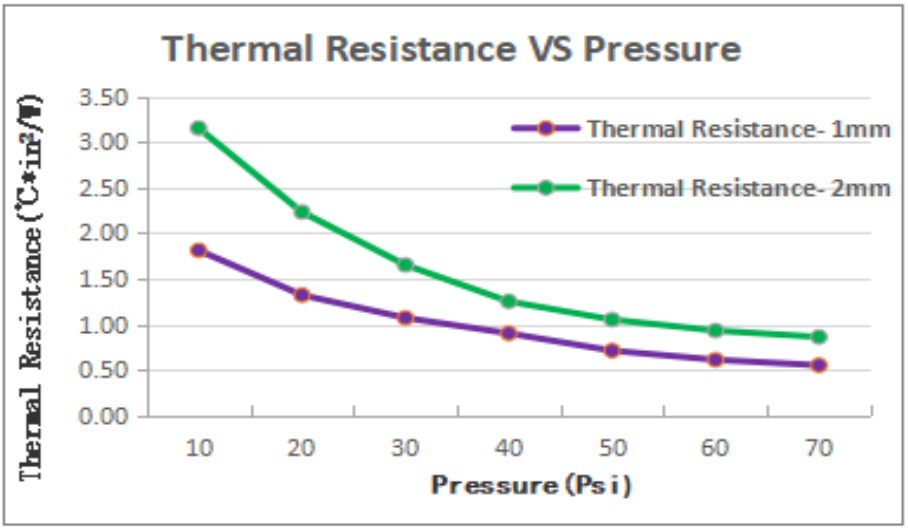

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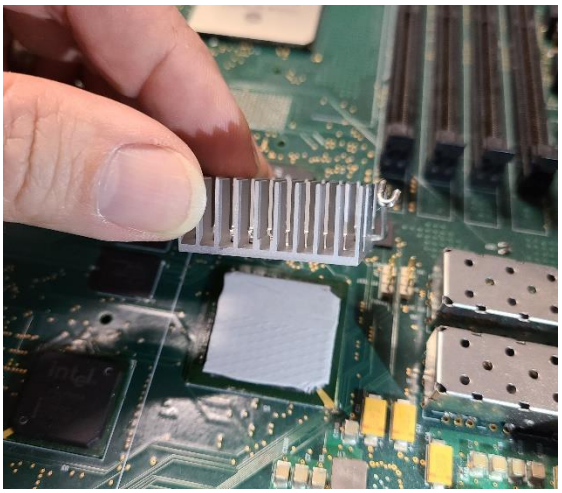

PL-1-3-76X127-30		
Color	Blue	visual
Thickness	0.15-10.0mm	ASTM D374
Specific Gravity	2.9g/cc	ASTM D792
Thermal Conductivity	3.0 W/m-K	ASTM D5470
Hardness (Shore OO)	30	ASTM D2240
Elongation	60%	ASTM D412
Tensile Strength	45psi	ASTM D412
Breakdown Voltage AC(KV)	＞2@0.5MM ＞4@0.75MM	ASTM D149
UL Flammability Rating	UL94	V-0
Volume Resistivity	$1*10^{13}\Omega.cm$	ASTM D257
Operating Temperature	-50～200℃	——
Thermal Impedance (1mm,@40psi)	$0.45℃*in^2/W$	ASTM D5470 *
Compression Ratio(1mm,@40psi)	35%	——
Dielectric Constant MHz	5.6	ASTM D150
RoHS	PASS	IEC 62321
Halogen	PASS	EN14582
REACH	PASS	EN14372

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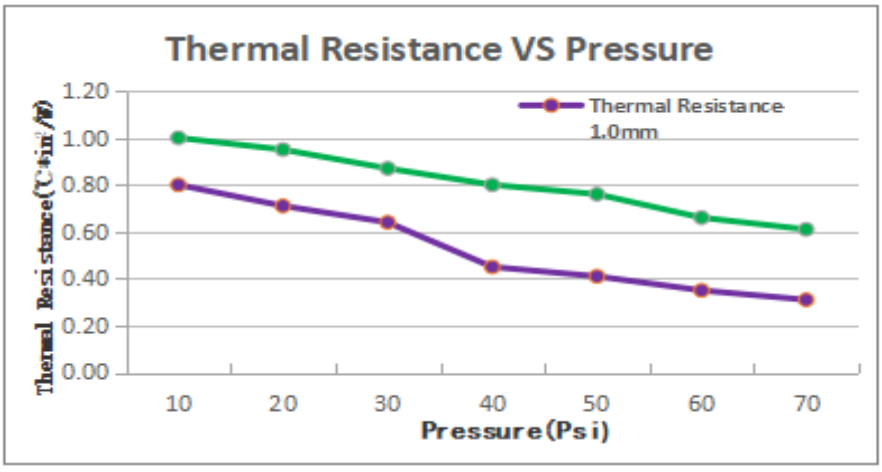

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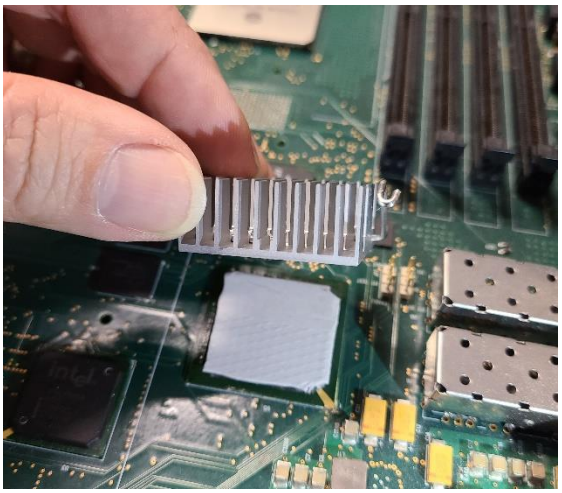

PL-1-5-76X127-60		
Color	Brown	visual
Thickness	0.5-10.0mm	ASTM D374
Specific Gravity	3.2g/cc	ASTM D792
Thermal Conductivity	5.0 W/m-K	ASTM D5470
Hardness (Shore OO)	60	ASTM D2240
Elongation	30%	ASTM D412
Tensile Strength	30psi	ASTM D412
Breakdown Voltage AC(KV)	＞2@0.5MM ＞4@0.75MM	ASTM D149
UL Flammability Rating	UL94	V-0
Volume Resistivity	$1*10^{13}\Omega.cm$	ASTM D257
Operating Temperature	-50～200℃	——
Thermal Impedance (1mm,@40psi)	0.40℃*in²/W	ASTM D5470 *
Compression Ratio(1mm,@40psi)	35%	——
Dielectric Constant MHz	5.5	ASTM D150
RoHS	PASS	IEC 62321
Halogen	PASS	EN14582
REACH	PASS	EN14372

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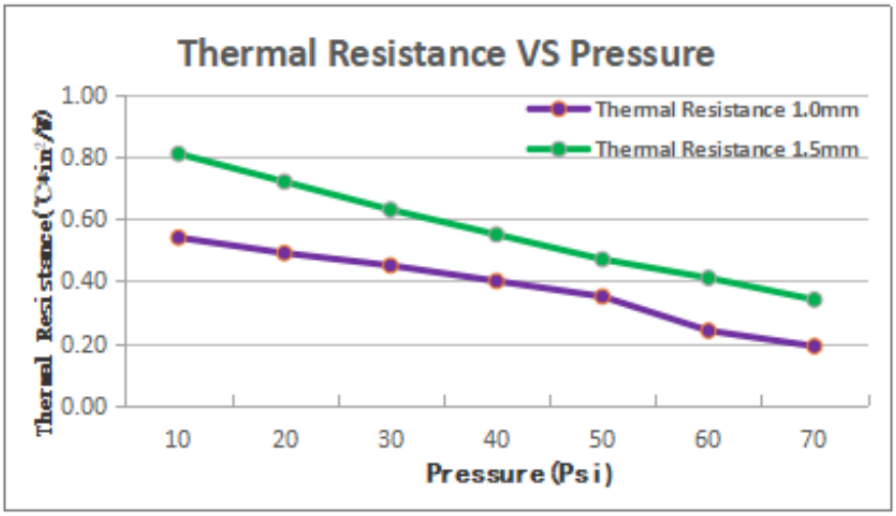

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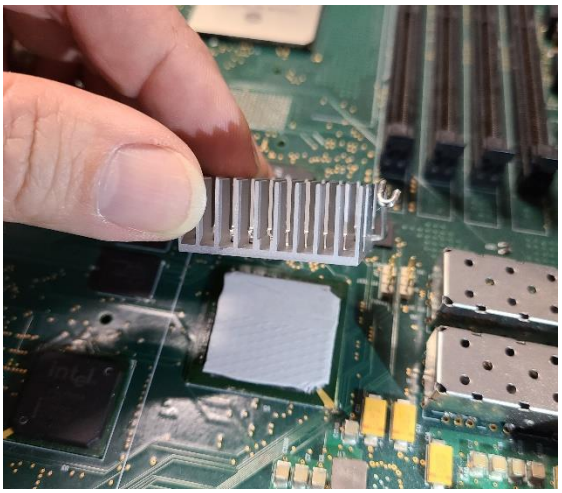

PL-1-6-76X127-60		
Color	Gray	visual
Thickness	0.5-5.0mm	ASTM D374
Specific Gravity	3.3g/cc	ASTM D792
Thermal Conductivity	6.0 W/m-K	ASTM D5470
Hardness (Shore OO)	60	ASTM D2240
Elongation	20%	ASTM D412
Tensile Strength	30psi	ASTM D412
Breakdown Voltage AC(KV)	＞2@0.5MM ＞4@0.75MM	ASTM D149
UL Flammability Rating	UL94	V-0
Volume Resistivity	$1*10^{13}\Omega.cm$	ASTM D257
Operating Temperature	-50～200℃	——
Thermal Impedance (1mm,@40psi)	$0.29℃*in^2/W$	ASTM D5470 *
Compression Ratio(1mm,@40psi)	35%	——
Dielectric Constant MHz	5.8	ASTM D150
RoHS	PASS	IEC 62321
Halogen	PASS	EN14582
REACH	PASS	EN14372

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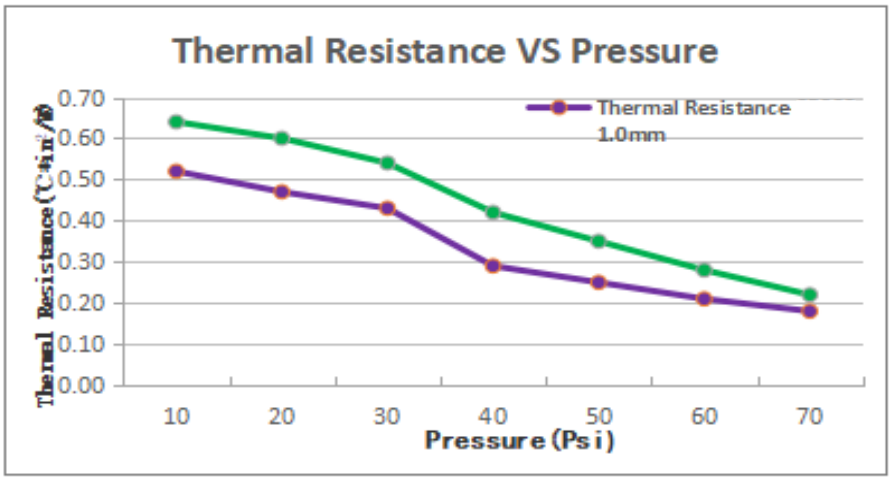

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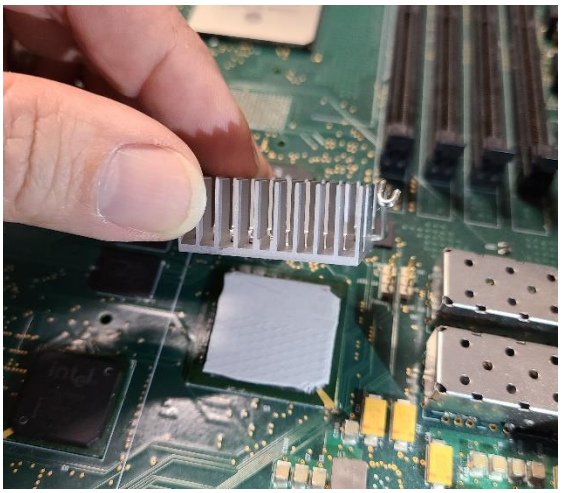

PL-1-8-76X127-50		
Color	Gray	visual
Thickness	0.5-5.0mm	ASTM D374
Specific Gravity	3.4g/cc	ASTM D792
Thermal Conductivity	8.0 W/m-K	ASTM D5470
Hardness (Shore OO)	50	ASTM D2240
Elongation	15%	ASTM D412
Tensile Strength	10psi	ASTM D412
Breakdown Voltage AC(KV)	＞2@0.5MM ＞4@0.75MM	ASTM D149
UL Flammability Rating	UL94	V-0
Volume Resistivity	$1*10^{13}\Omega.cm$	ASTM D257
Operating Temperature	-50～200°C	——
Thermal Impedance (1mm,@40psi)	0.29°C*in²/W	ASTM D5470 *
Compression Ratio(1mm,@40psi)	15%	——
Dielectric Constant MHz	5.5	ASTM D150
RoHS	PASS	IEC 62321
Halogen	PASS	EN14582
REACH	PASS	EN14372

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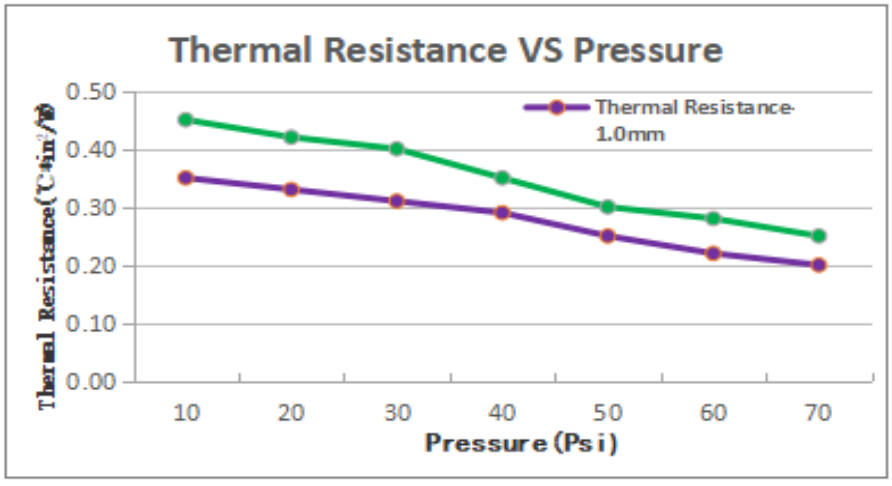

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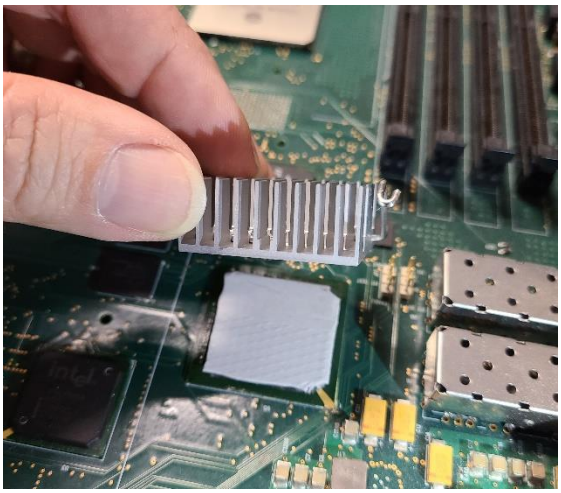

PL-1-10-76X127-55		
Color	Gray	visual
Thickness	0.5-5.0mm	ASTM D374
Specific Gravity	3.4g/cc	ASTM D792
Thermal Conductivity	10.0 W/m-K	ASTM D5470
Hardness (Shore OO)	55	ASTM D2240
Elongation	15%	ASTM D412
Tensile Strength	NA	ASTM D412
Breakdown Voltage AC(KV)	＞2@0.5MM ＞4@0.75MM	ASTM D149
UL Flammability Rating	UL94	V-0
Volume Resistivity	$1*10^{12}\Omega.cm$	ASTM D257
Operating Temperature	-50 ~ 150°C	——
Thermal Impedance (1mm,@30psi)	$0.12°C*in^2/W$	ASTM D5470 *
Compression Ratio(1mm,@30psi)	15%	——
Dielectric Constant MHz	5.5	ASTM D150
RoHS	PASS	IEC 62321
Halogen	PASS	EN14582
REACH	PASS	EN14372

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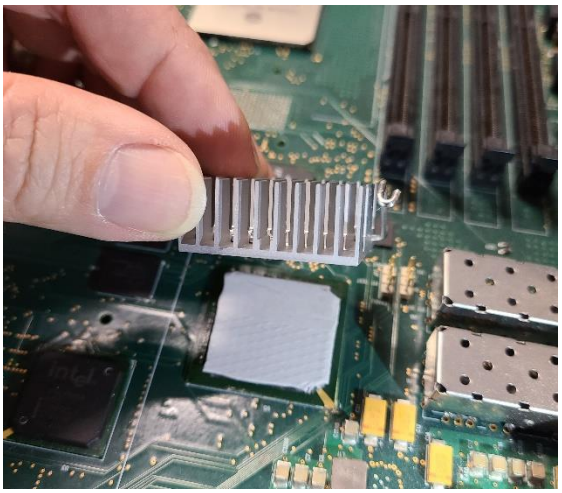

PL-1-12-76X127-75		
Color	Gray	visual
Thickness	0.5-5.0mm	ASTM D374
Specific Gravity	3.4g/cc	ASTM D792
Thermal Conductivity	12.0 W/m-K	ASTM D5470
Hardness (Shore OO)	0.5 – 1.0 mm: 75 1.0 – 5.0 mm: 55 - 75	ASTM D2240
Elongation	15%	ASTM D412
Tensile Strength	NA	ASTM D412
Breakdown Voltage AC(KV)	＞5	ASTM D149
UL Flammability Rating	UL94	V-0
Volume Resistivity	$1*10^{12}\Omega.cm$	ASTM D257
Operating Temperature	-50 ~ 150°C	——
Thermal Impedance (1mm,@30psi)	0.10°C*in²/W	ASTM D5470 *
Compression Ratio(1mm,@30psi)	15%	——
Dielectric Constant MHz	5.5	ASTM D150
RoHS	PASS	IEC 62321
Halogen	PASS	EN14582
REACH	PASS	EN14372

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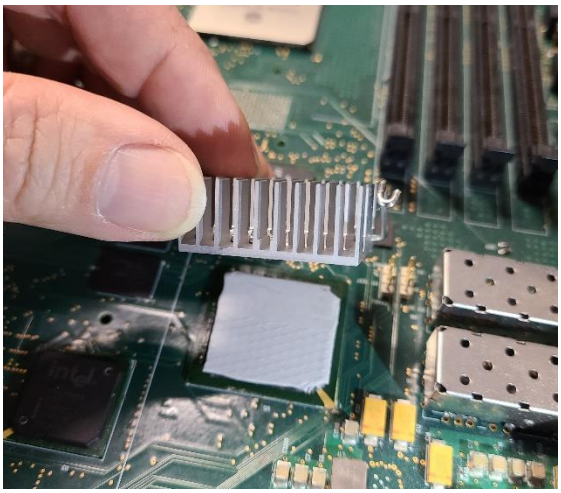

PL-1-14-76X127-65		
Color	Purple	visual
Thickness	0.5-5.0mm	ASTM D374
Specific Gravity	3.3g/cc	ASTM D792
Thermal Conductivity	15.0 W/m-K	ASTM D5470
Hardness (Shore OO)	65	ASTM D2240
Elongation	NA	ASTM D412
Tensile Strength	NA	ASTM D412
Breakdown Voltage AC(KV)	8	ASTM D149
UL Flammability Rating	UL94	V-0
Volume Resistivity	NA	ASTM D257
Operating Temperature	-60 ~ 150℃	——
Thermal Impedance (1mm,@30psi)	0.074℃*in²/W	ASTM D5470 *
Compression Ratio(1mm,@30psi)	36%	——
Dielectric Constant MHz	NA	ASTM D150
RoHS	PASS	IEC 62321
Halogen	PASS	EN14582
REACH	PASS	EN14372

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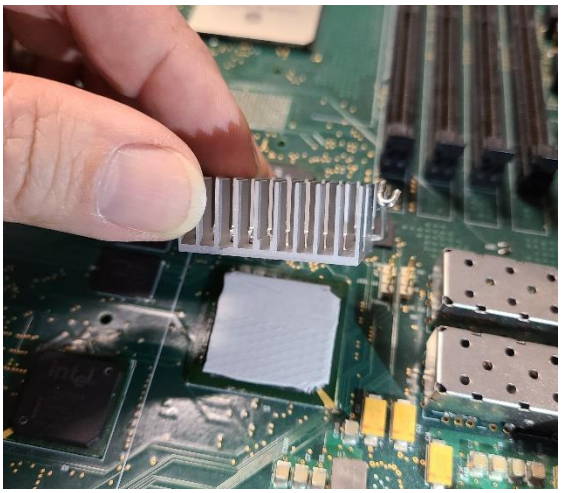

PLF-1-8-76X127-70		
Color	Light Gray	visual
Thickness	0.5-5.0mm	ASTM D374
Specific Gravity	3.4g/cc	ASTM D792
Thermal Conductivity	8.0 W/m-K	ASTM D5470
Hardness (Shore OO)	70	ASTM D2240
Elongation	50%	ASTM D412
Tensile Strength	30psi	ASTM D412
Breakdown Voltage AC(KV)	200	ASTM D149
UL Flammability Rating	UL94	V-0
Volume Resistivity	$1*10^{11}\Omega.cm$	ASTM D257
Operating Temperature	-40 ~ 125℃	——
Thermal Impedance (1mm,@40psi)	$0.10℃*in^2/W$	ASTM D5470 *
Compression Ratio(1mm,@40psi)	40%	——
Dielectric Constant MHz	NA	ASTM D150
RoHS	PASS	IEC 62321
Halogen	PASS	EN14582
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SILICONE FREE

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Wakefield Thermal:

PL-1-1.5-76X127-15 PL-1-10-76X127-55 PL-1-12-76X127-75 PL-1-14-76X127-65 PL-1-3-76X127-30 PL-1-5-76X127-60 PL-1-6-76X127-60 PL-1-8-76X127-50 PLF-1-8-76X127-70 PLK-129345