



MIYO FILM HEATER TEST WITH SINK

2018.11

Test conduct by Account Manager:
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銘優科技股份有限公司
Miyo Technology Co., Ltd.

TEST CONDITION-SINK ALUMINUM

Cooler: AVC North Bridge Aluminum Sink

Sink size: 40x40x7mm

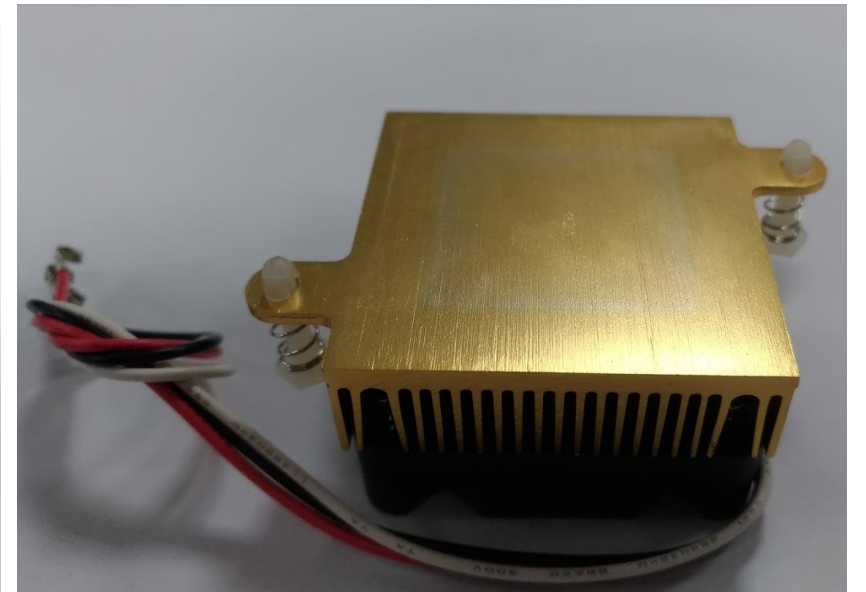
Condition: Heater stick on aluminum sink thickness with fan 38mm DIA fan.

AMBIENT TEMPERATURE: 26 DEGREE C

Heater TYPE 1: 25x25mm

- STICK WITH THERMAL PAD
- STICK WITHOUT THERMAL PAD

Heater TYPE 2: 40x40mm



HEATER TEST 1: 25X25

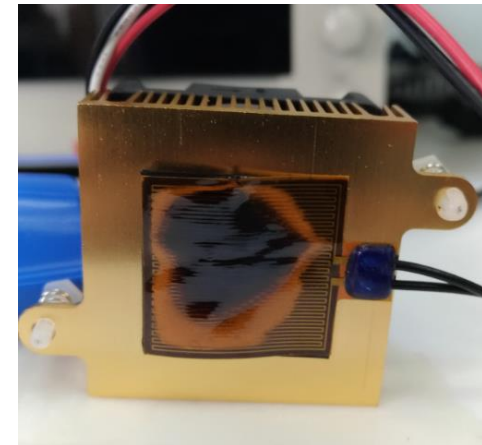
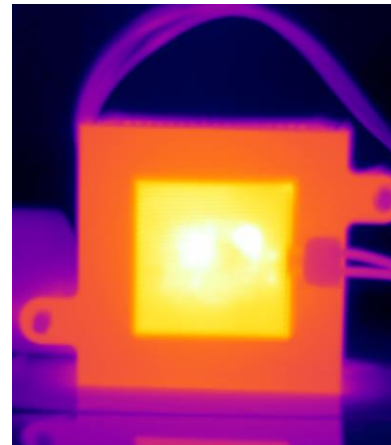
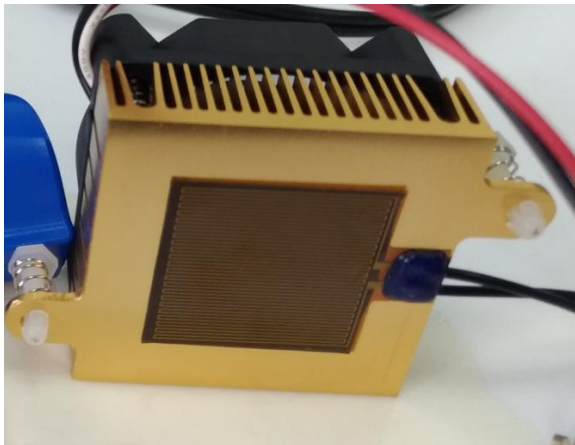
MAX WATT:33W

MAX TEMP.: 140 DEGREE C

WATT DENSITY: 5.28W/CM²

NOTE:

1. HEATER WERE STICK ON SINK USE 3M VHB AND THERMAL PAD IN BETWEEN.
2. HEATER WERE BURN OFF AFTER 10 SECONDS FAN TURN OFF.



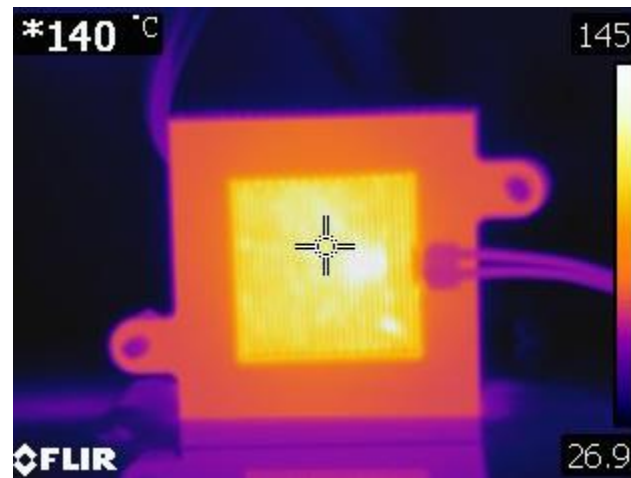
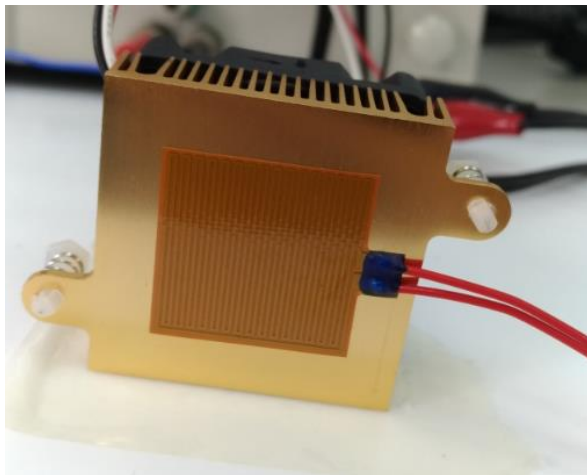
HEATER TEST 2: 25X25

MAX WATT:45.5W

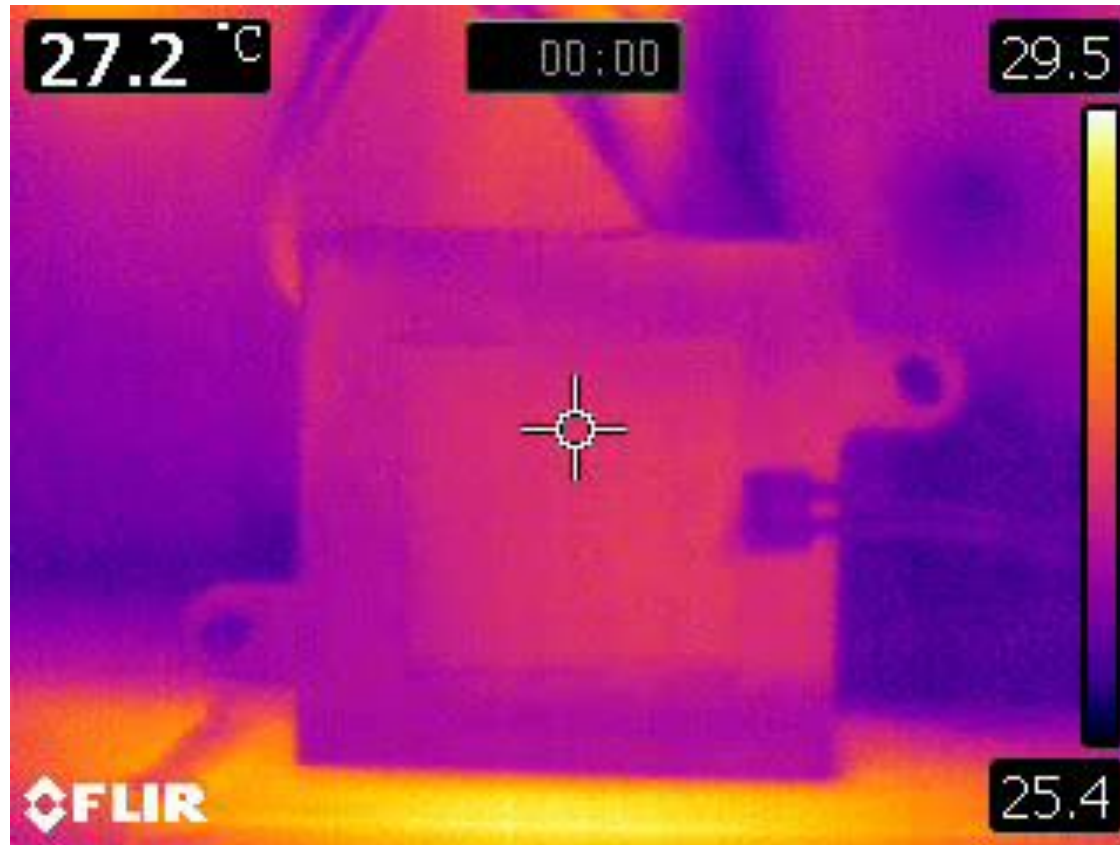
MAX TEMP.: 145 DEGREE C

WATT DENSITY: 7.28W/CM²

NOTE: HEATER WERE STICK ON SINK USE 3M VHB WITHOUT THERMAL PAD IN BETWEEN.



HEATER HEAT UP VIDEO:25X25



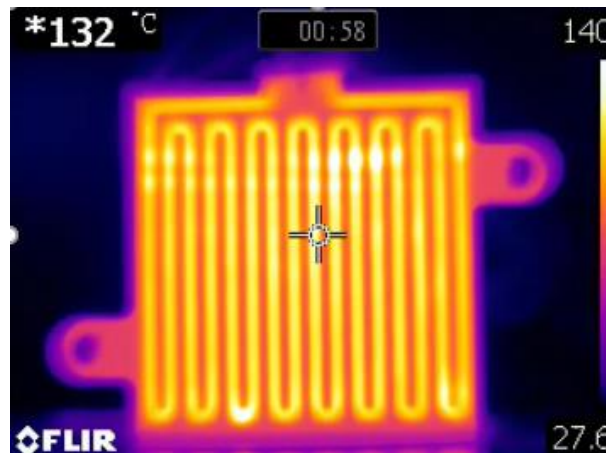
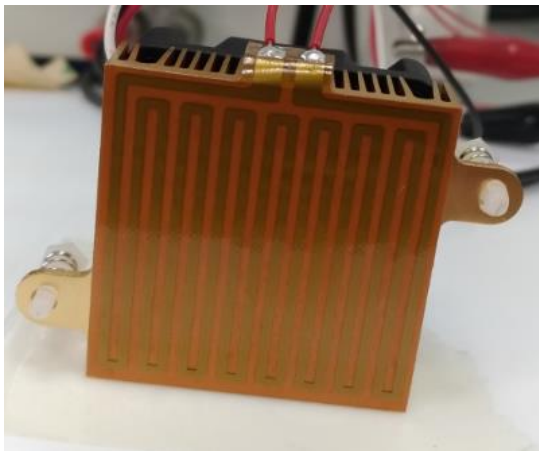
HEATER TEST 3: 40X40

WATT:60.75W

MAX TEMP.: 140 DEGREE C

WATT DENSITY: 3.79W/CM²

NOTE: HEATER WERE STICK ON SINK USE 3M VHB WITHOUT THERMAL PAD IN BETWEEN.



HEATER HEAT UP VIDEO:40X40



TEST CONDITION-COOLER MASTER T2 MINI

Cooler: Cooler Master T2 Mini

Sink size: 32x32x117mm

Condition: Heater stick on aluminum sink thickness with fan 88mm DIA fan.

AMBIENT TEMPERATURE: 27 DEGREE C

Heater TYPE 1: 30x30mm

- STICK WITHOUT THERMAL PAD



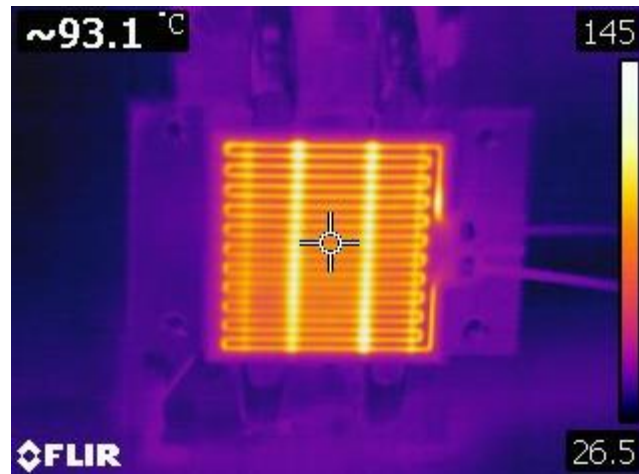
HEATER TEST 4: 30X30

WATT:68.85W

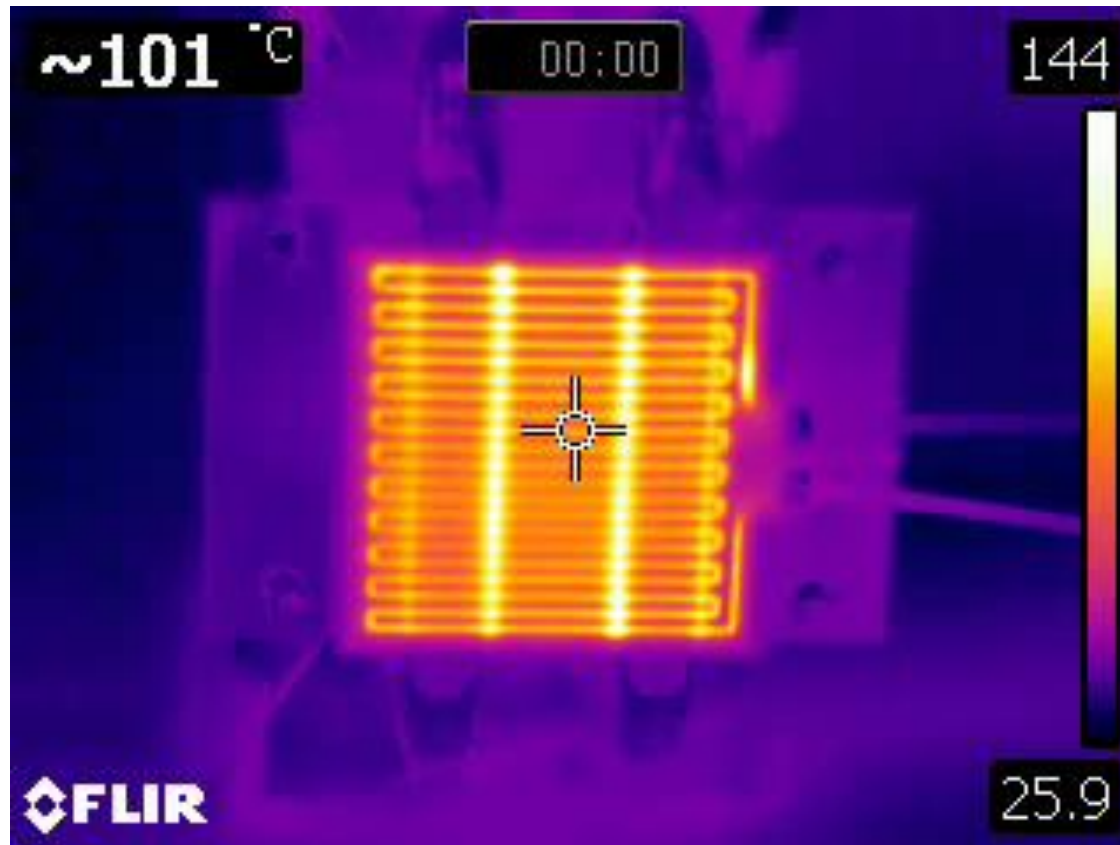
MAX TEMP.: 145 DEGREE C

WATT DENSITY: 7.65W/CM²

NOTE: HEATER WERE STICK ON SINK USE 3M VHB WITHOUT THERMAL PAD IN BETWEEN.



HEATER HEAT UP VIDEO:30X30



CONCLUSION

1. MIYO Commercial polyimide film heater can sustain up to 3.79-7.65 w/cm² with sink installed.
2. Compare heater 3 and 4. Best test condition is not to use thermal pad and use high efficiency heat sink that meet heater dimension.

	Max watt	Watt density	Sink vs Heater area	Note
Heater 1 25x25	33	5.28	39%	Stick with VHB and Thermal pad
Heater 2 25x25	45.5	7.28	39%	Stick use VHB only
Heater 3 40x40	60.75	3.79	100%	Stick use VHB only
Heater 4 30x30	68.85	7.65	88%	Stick use VHB only / Cooler Master T2 Mini