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Additional Resources: Product Page

MODEL: CP050-4040-A | DESCRIPTION: PELTIER MODULE

FEATURES

- arcTEC™ structure
- wide ΔT max
- precise temperature control
- low profile
- solid state construction
- silicone sealed option available

RoHS

SPECIFICATIONS

parameter	conditions/description	min	typ	max	units
input voltage[1]	Th = 27°C Th = 50°C			16.8 18.02	V V
input current[2]				5.05	A
internal resistance[3]	Th = 27°C Th = 50°C		2.55 2.76		Ω Ω
Qmax[4]	Th = 27°C Th = 50°C			54.0 56.4	W W
ΔTmax[5]	Th = 27°C Th = 50°C			74 83	°C °C
solder melting temperature	connection between thermoelectric pairs	240			°C
hot side plate				195	°C
cold side plate		-60			°C
assembly compression				0.34	MPa
RoHS	yes				

Notes:
1. Maximum voltage at ΔT max and T_h=27°C
2. Maximum current to achieve ΔT max
3. Measured by AC 4-terminal method at 25°C
4. Maximum heat absorbed at cold side occurs at I_{max}, V_{max}, and ΔT=0°C
5. Maximum temperature difference occurs at I_{max}, V_{max}, and Q=0 W (ΔT max measured in a vacuum at 1.3 Pa)
6. Tolerance for all thermal and electrical parameters is ±10%.

PART NUMBER KEY

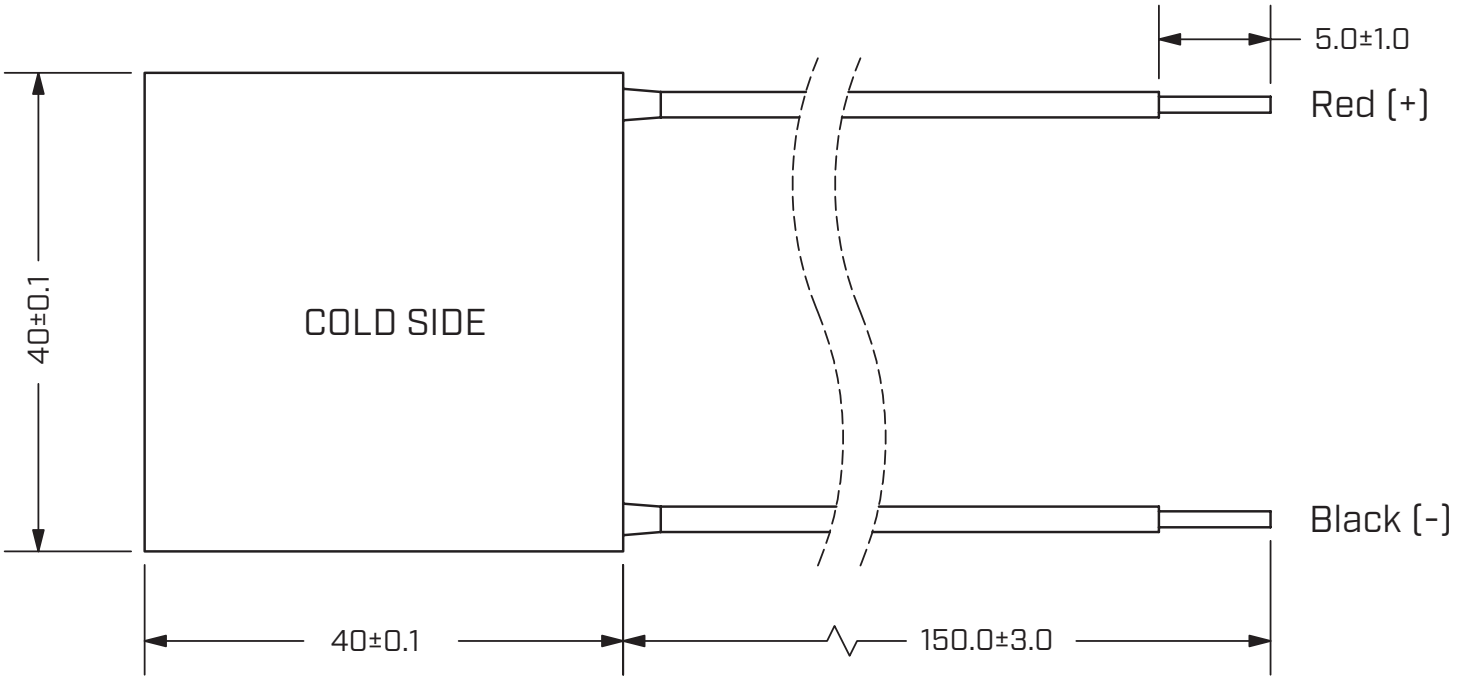
CP050 - 4040 - A **X**

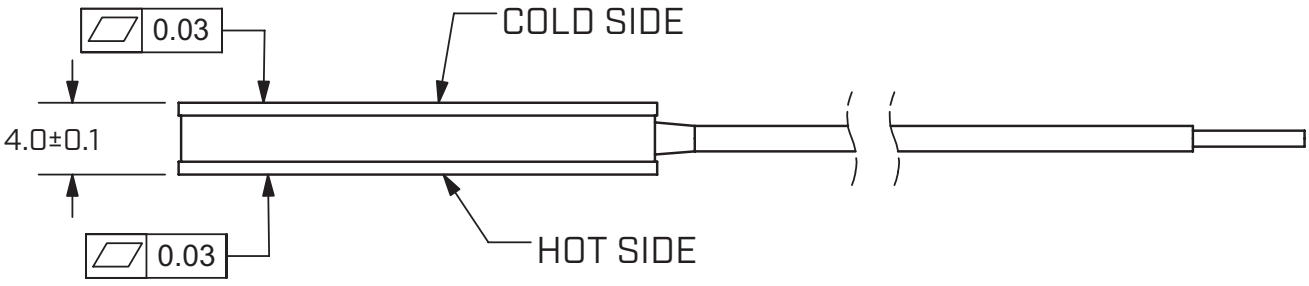
- CP050 - 4040 - A: Base Number
- **X**: Silicone Sealed:
  "blank" = not included
  S = with silicone sealant

MECHANICAL DRAWING

units: mm

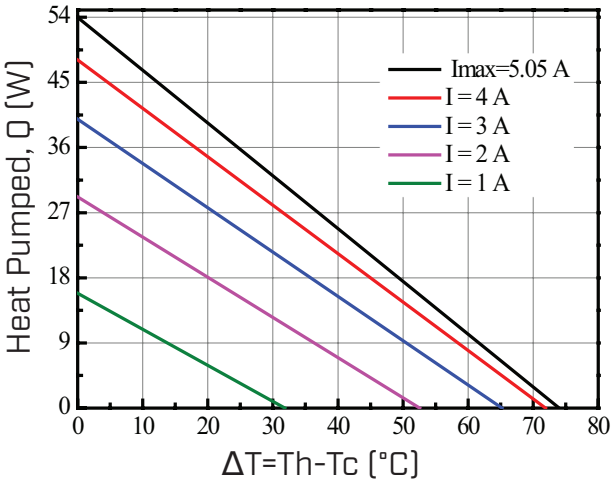
	MATERIAL	PLATING
ceramic plate	96% AL_2O_3	
wire leads	UL1726 20 AWG	tin
sealer (optional)	704 silicone sealant (between cold and hot side plates)	
marking	P/N printed on cold side surface	



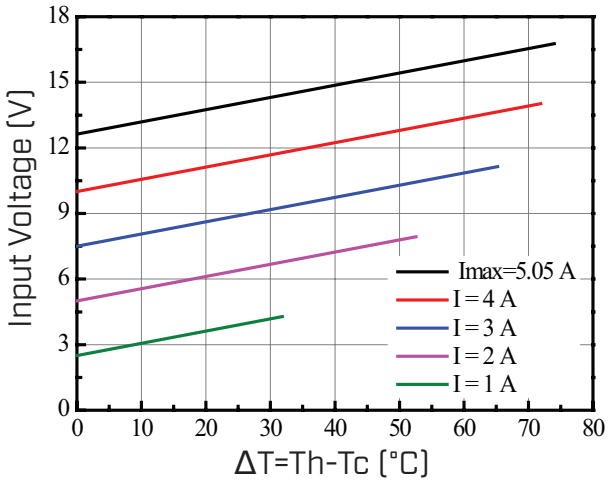


PERFORMANCE (Th=27°C)

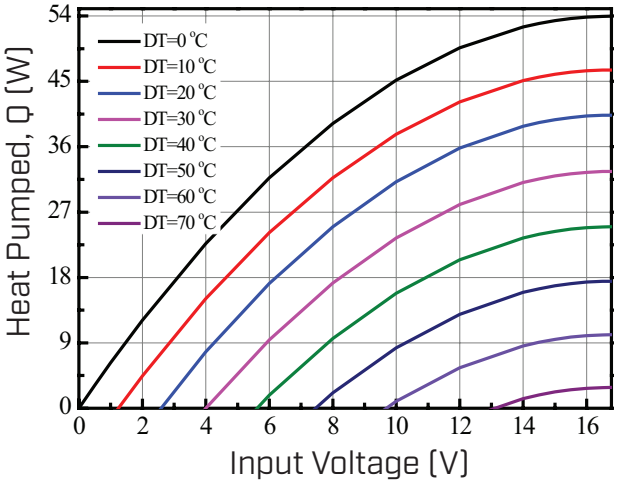
Heat Pumped, Q Vs. ΔT



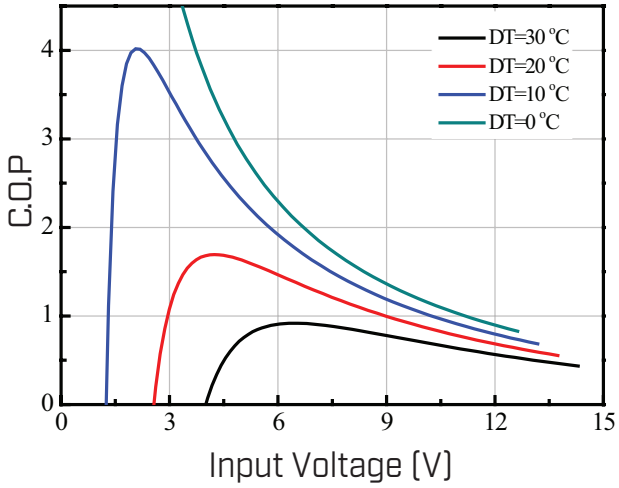
Input Voltage, V Vs. ΔT



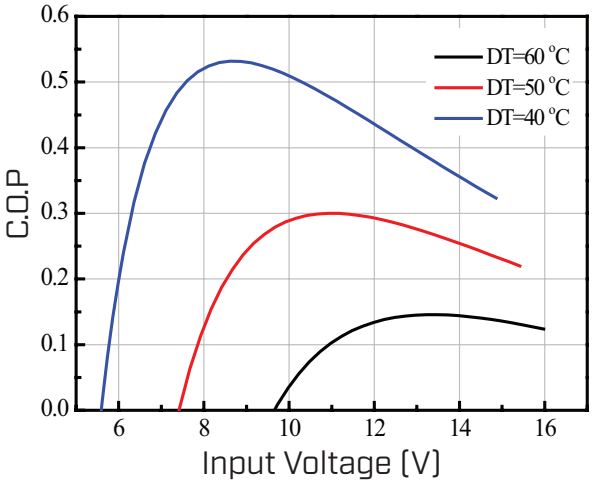
Heat Pumped, Q Vs. Input Voltage, V



COP Vs. Input Voltage, V (ΔT=0~30°C)

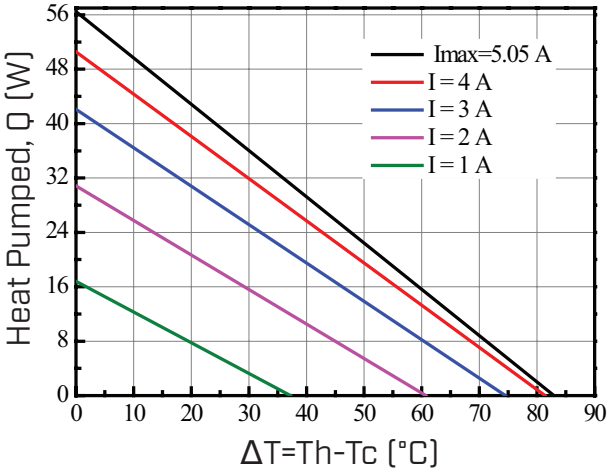


COP Vs. Input Voltage, V (ΔT=40-60°C)

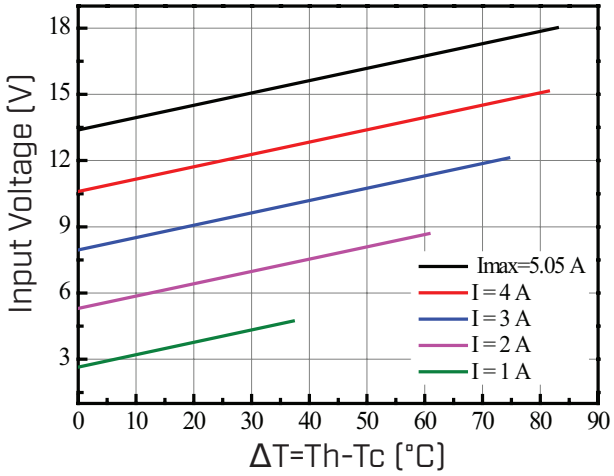


PERFORMANCE (Th=50°C)

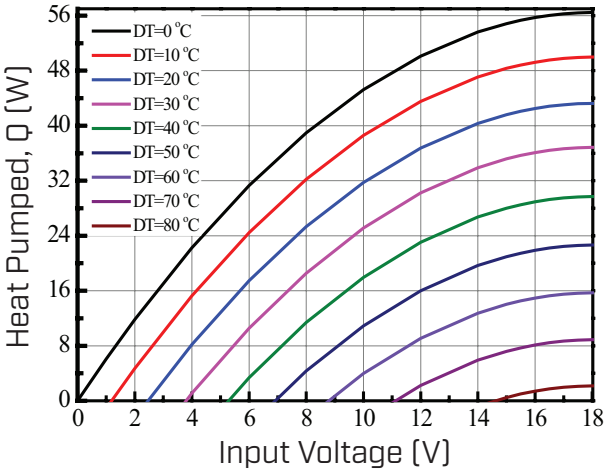
Heat Pumped, Q Vs. ΔT



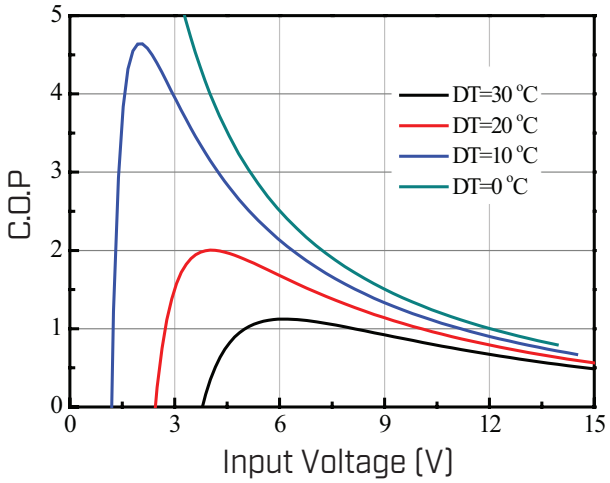
Input Voltage, V Vs. ΔT



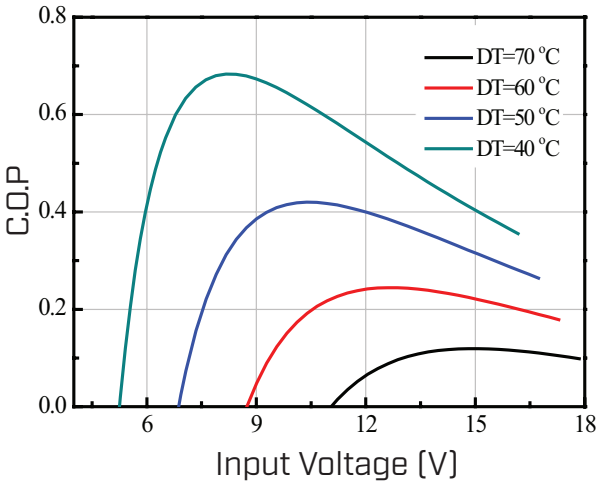
Heat Pumped, Q Vs. Input Voltage, V



COP Vs. Input Voltage, V (ΔT=0~30°C)



COP Vs. Input Voltage, V (ΔT=40-70°C)



REVISION HISTORY

rev.	description	date
1.0	initial release	07/24/2026

The revision history provided is for informational purposes only and is believed to be accurate.

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Same Sky offers a one (1) year limited warranty. Complete warranty information is listed on our website.

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