


MODEL: CP023-1566 | **DESCRIPTION:** PELTIER MODULE

FEATURES

- 2-stage TEC module
- wide ΔT max
- precise temperature control
- silicone sealed
- solid state construction


SPECIFICATIONS

parameter	conditions/description	min	typ	max	units
input voltage ¹	Th = 27°C			3.6	V
	Th = 50°C			4.0	V
input current ²				2.3	A
internal resistance ³	Th = 27°C		1.45		Ω
	Th = 50°C		1.60		Ω
Qmax ⁴	Th = 27°C			3.9	W
	Th = 50°C			4.3	W
ΔT max ⁵	Th = 27°C			91	°C
	Th = 50°C			101	°C
solder melting temperature	connection between thermoelectric pairs	240			°C
hot side plate				195	°C
cold side plate		-60			°C
assembly compression	cold side			1.1	MPa
	hot side			0.6	MPa
RoHS	yes				

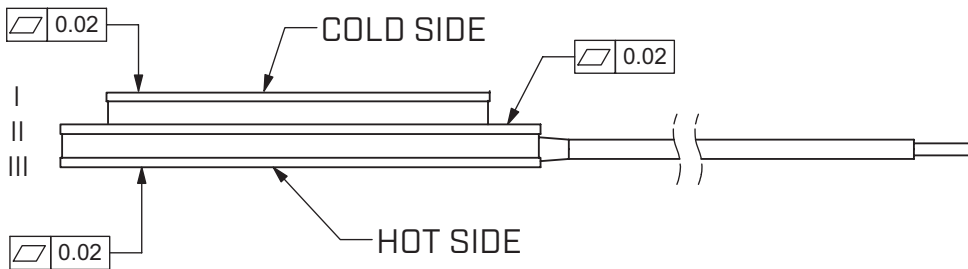
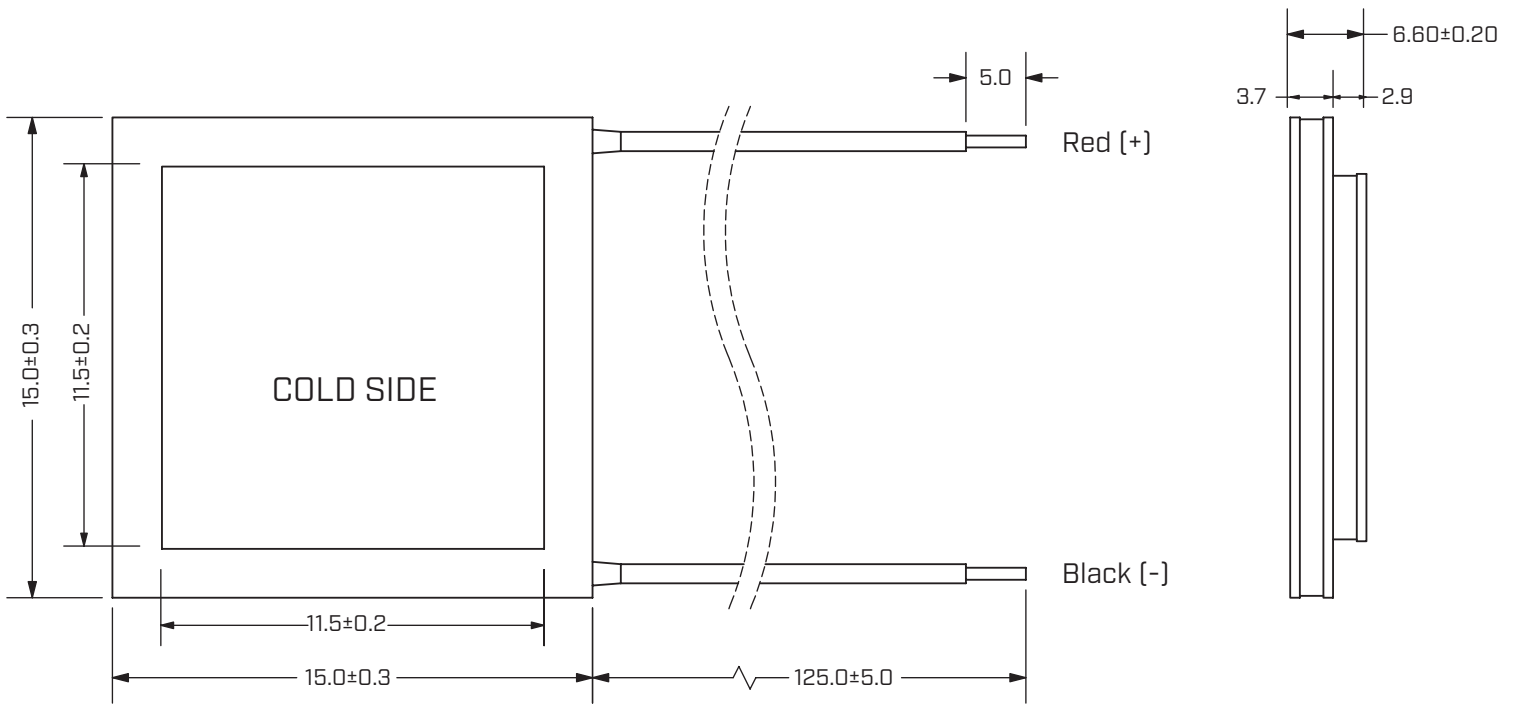
Notes:

1. Maximum voltage at ΔT max and $T_c = 27^\circ\text{C}$
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 $\Delta T = 0^\circ\text{C}$
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 $\pm 10\%$.

MECHANICAL DRAWING

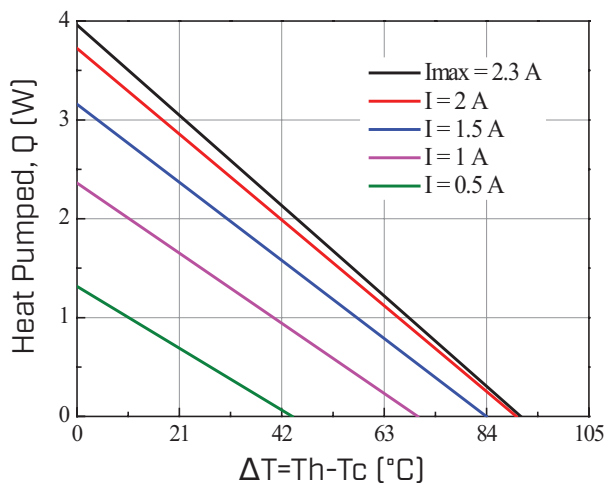
units: mm

	MATERIAL	PLATING
ceramic plate	96% Al_2O_3	
wire leads	UL3443 20 AWG	tin
sealer	704 silicone sealant (between cold and hot side plates)	
marking	P/N printed on cold side surface	

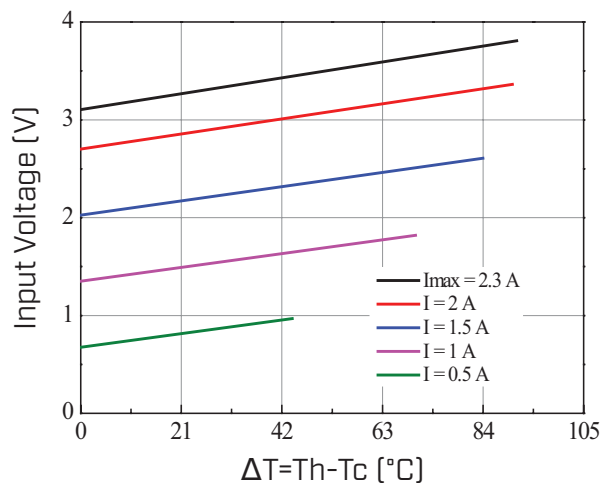


PERFORMANCE (Th=27°C)

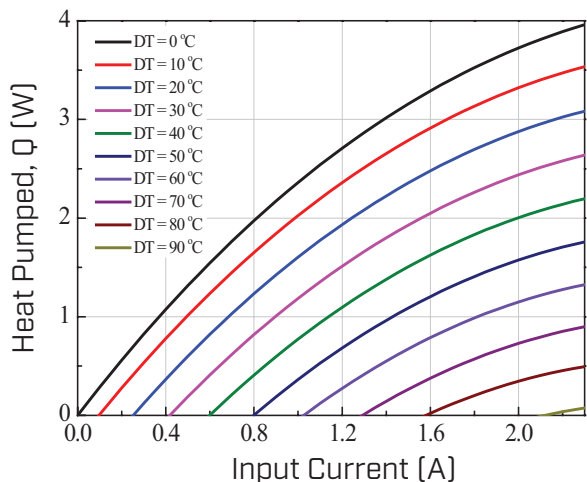
Heat Pumped, Q Vs. ΔT



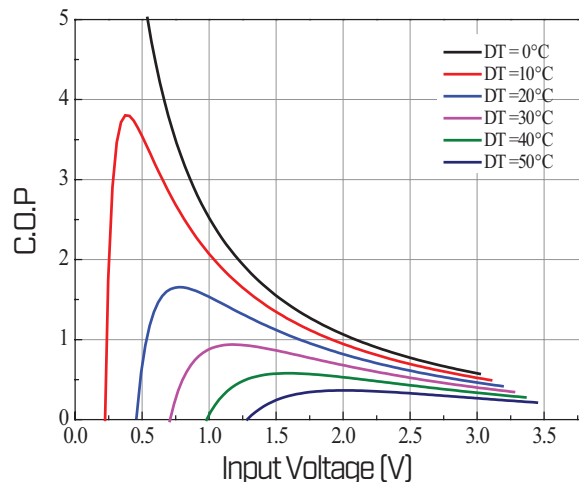
Input Voltage, V Vs. ΔT



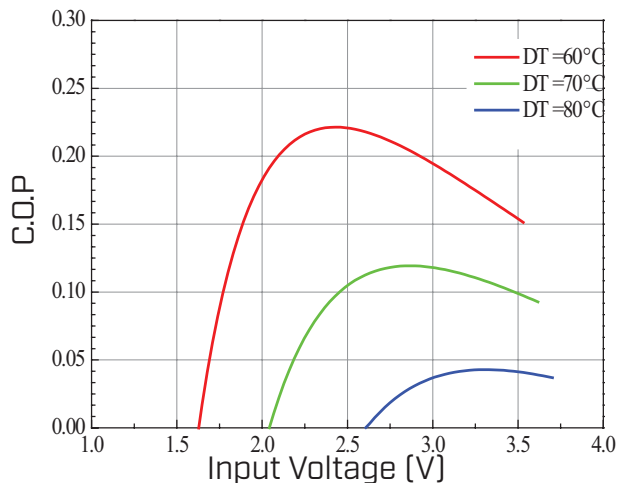
Heat Pumped, Q Vs. Input Current, I



COP Vs. Input Voltage, V (ΔT=0~50°C)

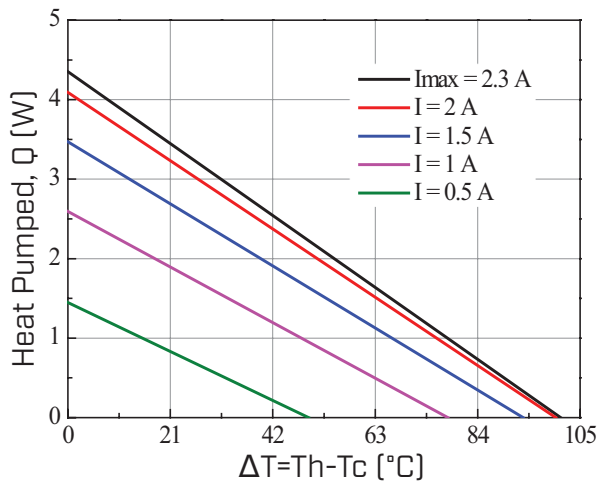


COP Vs. Input Voltage, V (ΔT=60~80°C)

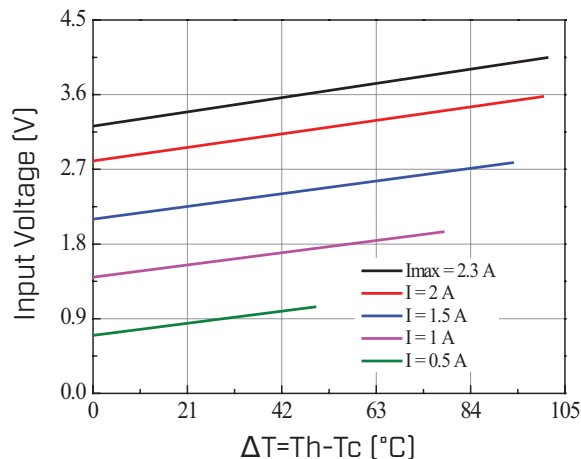


PERFORMANCE (Th=50°C)

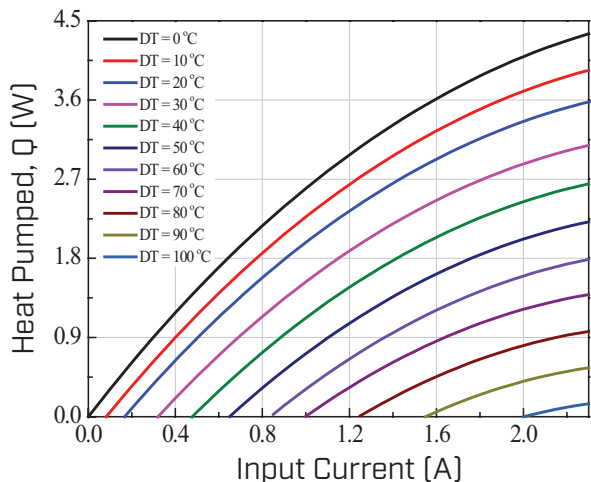
Heat Pumped, Q Vs. ΔT



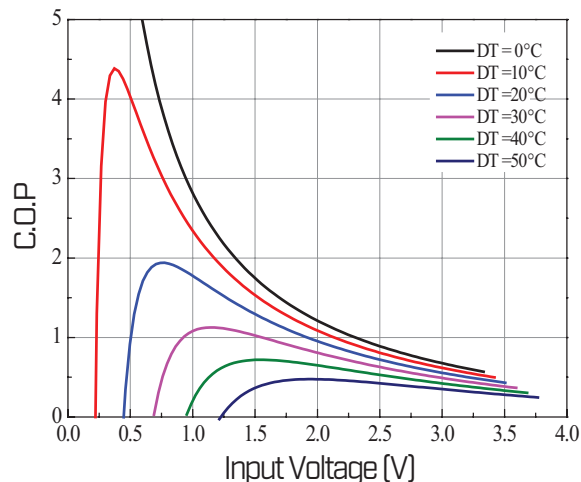
Input Voltage, V Vs. ΔT



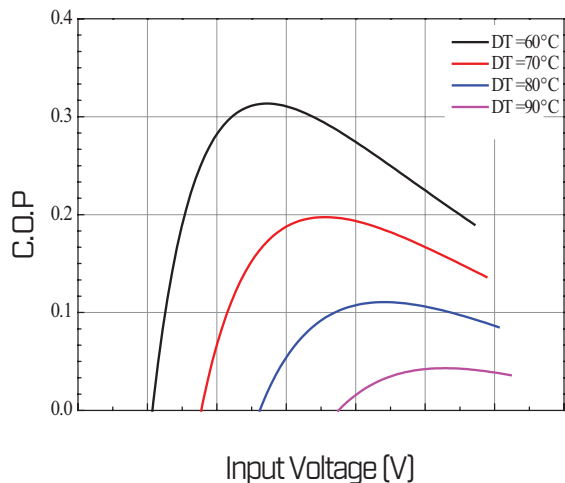
Heat Pumped, Q Vs. Input Current, I



COP Vs. Input Voltage, V ($\Delta T = 0 \sim 50^\circ\text{C}$)



COP Vs. Input Voltage, V ($\Delta T = 60 \sim 90^\circ\text{C}$)



REVISION HISTORY

rev.	description	date
1.0	initial release	12/11/2024

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



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