



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

FEATURES

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



SPECIFICATIONS

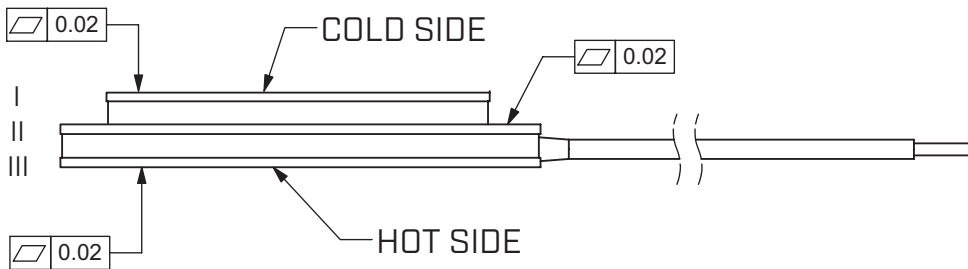
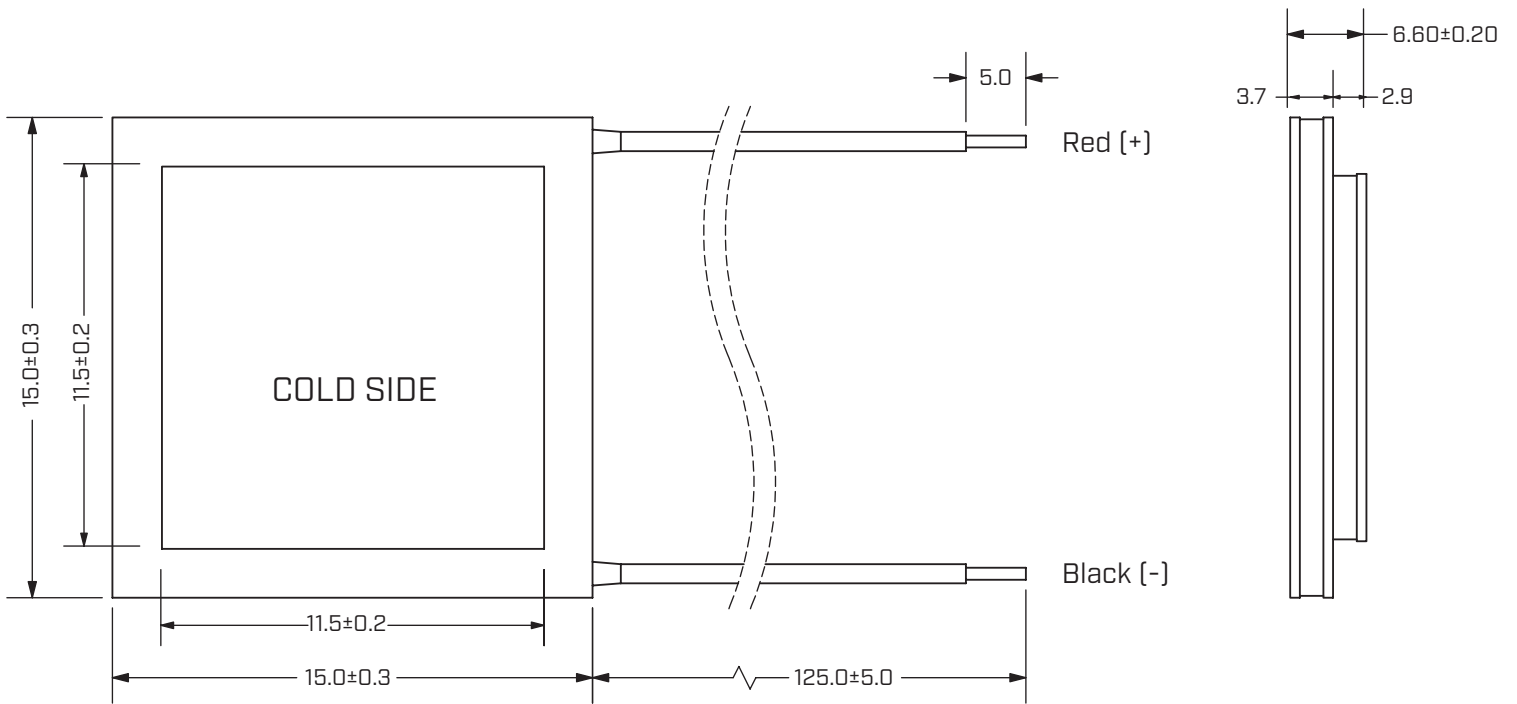
| parameter | conditions/description | min | typ | max | units |
|----------------------------------|---|-----|------|-----|----------|
| input voltage ¹ | Th = 27°C | | | 3.6 | V |
| | Th = 50°C | | | 4.0 | V |
| input current ² | | | | 2.3 | A |
| internal resistance ³ | Th = 27°C | | 1.45 | | Ω |
| | 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

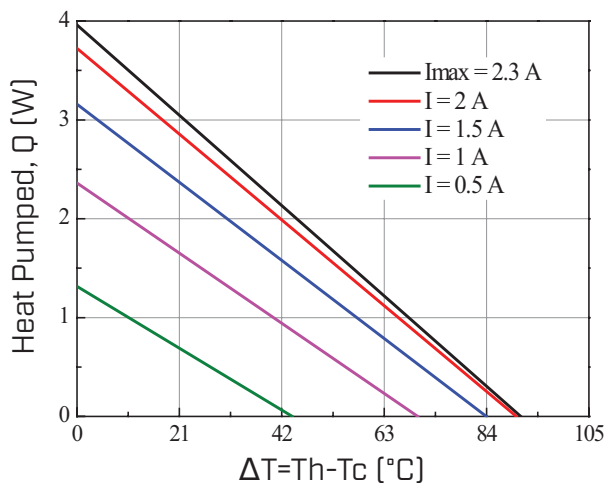
units: mm

| | 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 | |

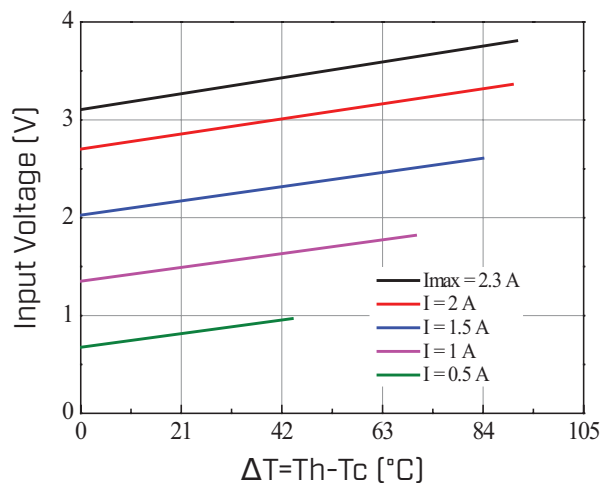


PERFORMANCE (Th=27°C)

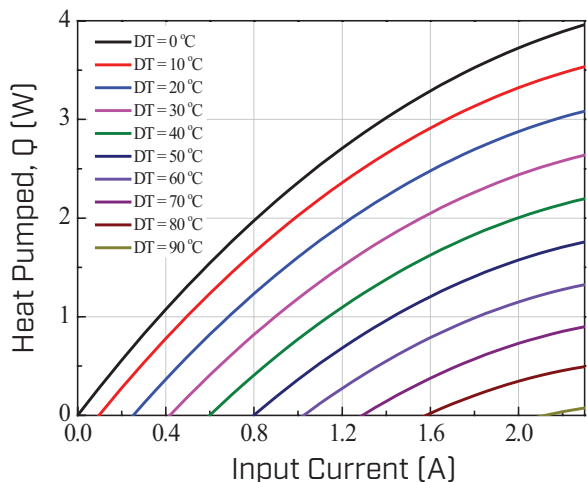
Heat Pumped, Q Vs. ΔT



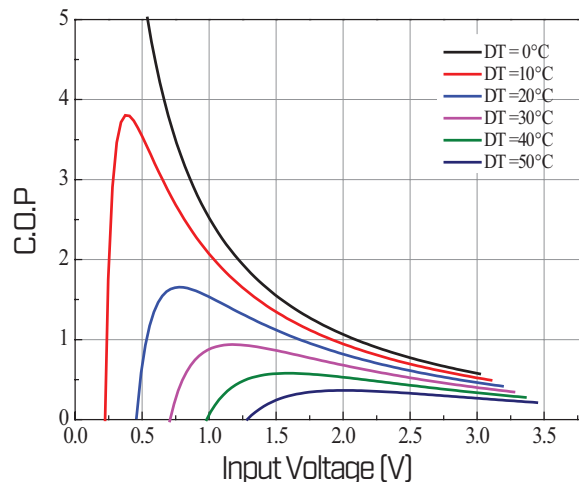
Input Voltage, V Vs. ΔT



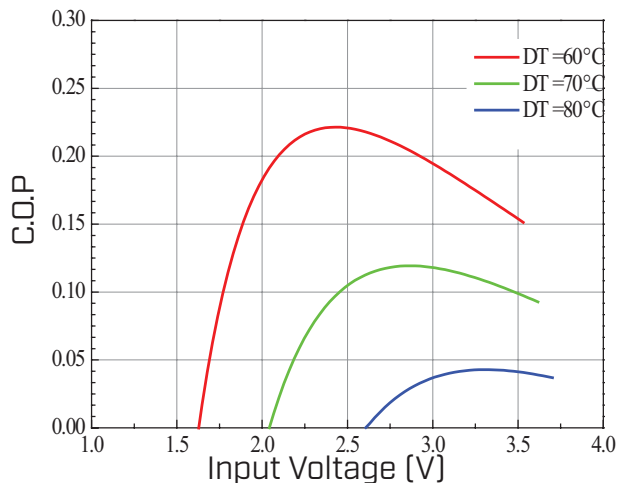
Heat Pumped, Q Vs. Input Current, I



COP Vs. Input Voltage, V (ΔT=0~50°C)

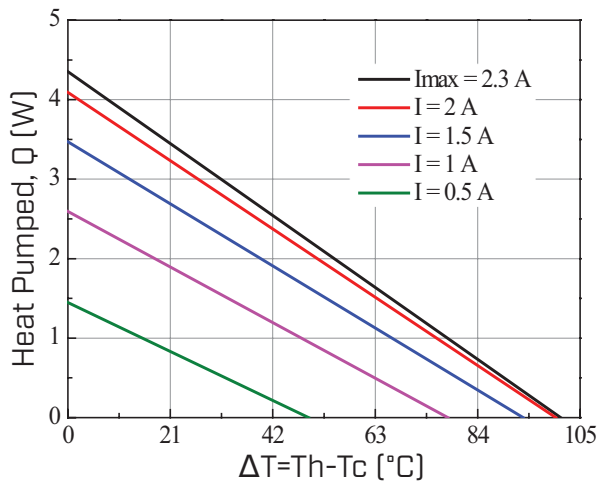


COP Vs. Input Voltage, V (ΔT=60~80°C)

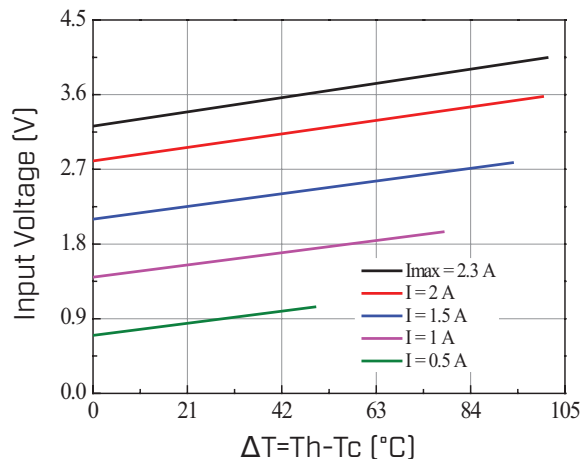


PERFORMANCE (Th=50°C)

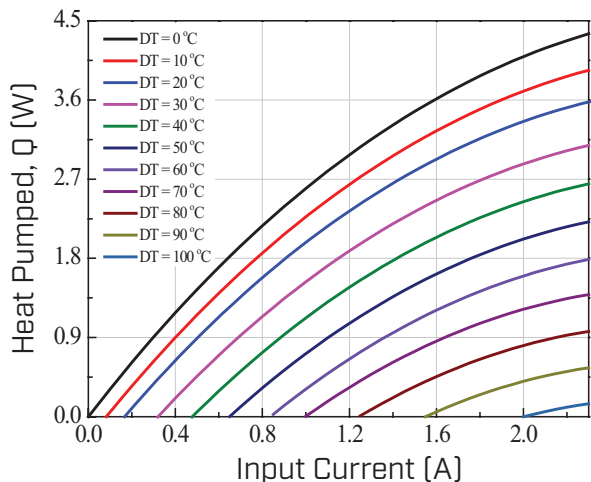
Heat Pumped, Q Vs. ΔT



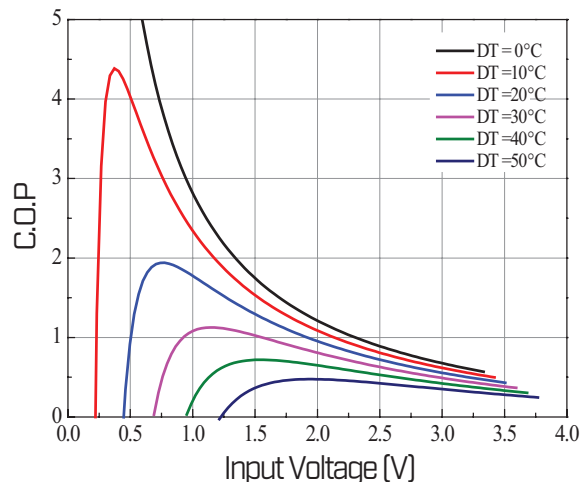
Input Voltage, V Vs. ΔT



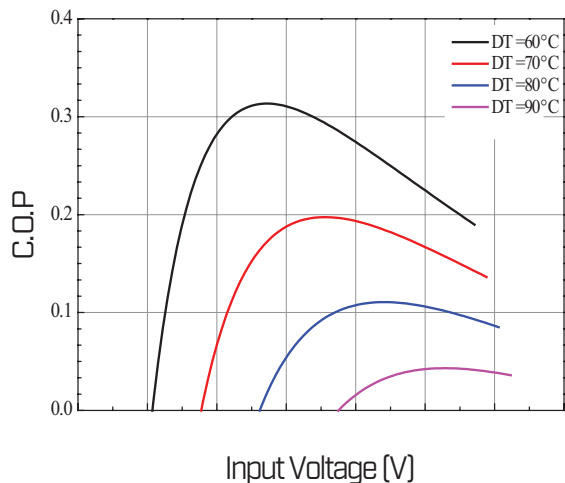
Heat Pumped, Q Vs. Input Current, I



COP Vs. Input Voltage, V (ΔT=0~50°C)



COP Vs. Input Voltage, V (ΔT=60~90°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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