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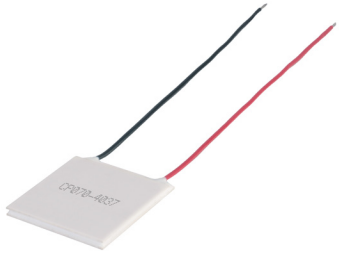
# MODEL: CP070-4037 | DESCRIPTION: PELTIER MODULE

## FEATURES

- silicon sealed
- wide ΔT max
- precise temperature control
- maximum hot side temperature of 195°C
- solid state construction



RoHS

## SPECIFICATIONS

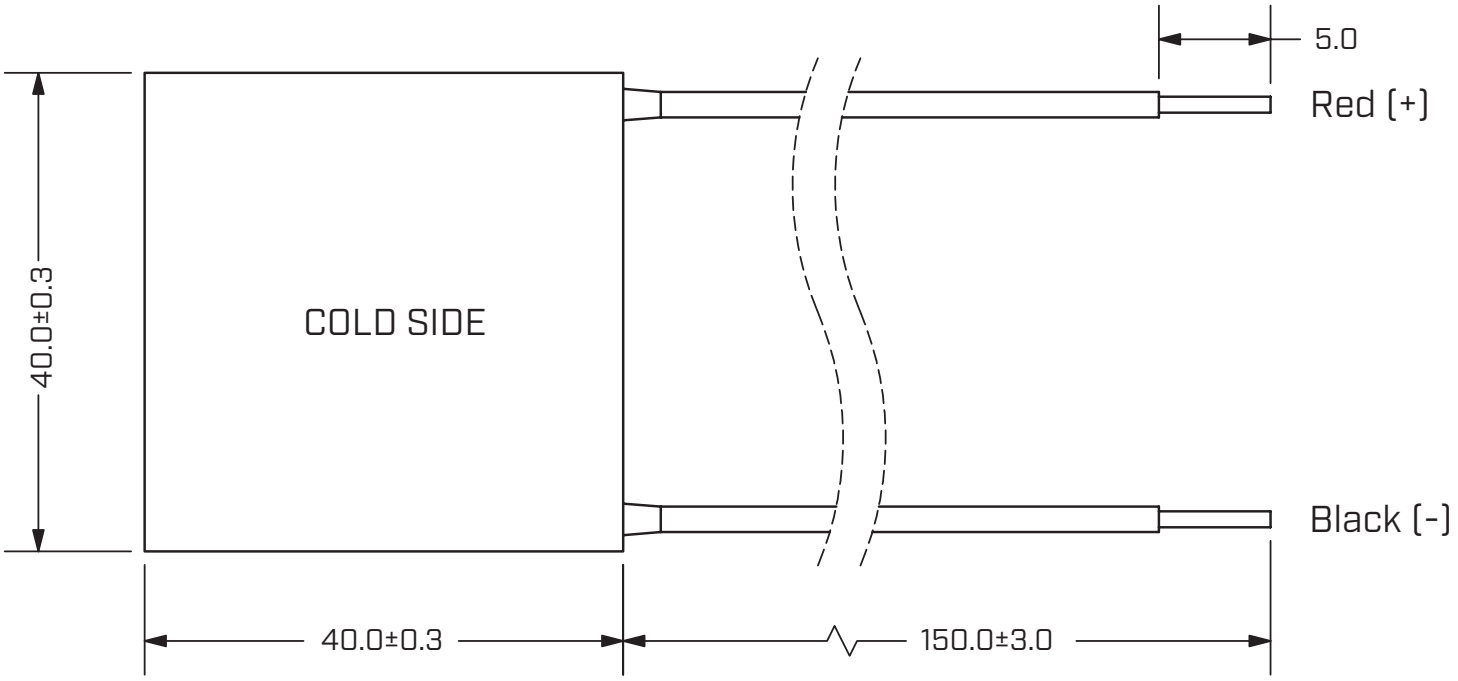
| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| input voltage[1] | Th = 27°C<br>Th = 50°C | | | 16.0<br>17.2 | V<br>V |
| input current[2] | | | | 7.0 | A |
| internal resistance[3] | Th = 27°C<br>Th = 50°C | | 1.8<br>1.95 | | Ω<br>Ω |
| Qmax[4] | Th = 27°C<br>Th = 50°C | | | 70.1<br>76.6 | W<br>W |
| ΔTmax[5] | Th = 27°C<br>Th = 50°C | | | 70<br>79 | °C<br>°C |
| solder melting temperature | connection between thermoelectric pairs | 240 | | | °C |
| hot side plate | | | | 195 | °C |
| cold side plate | | -60 | | | °C |
| assembly compression | | | 0.49 | | MPa |
| RoHS | yes | | | | |

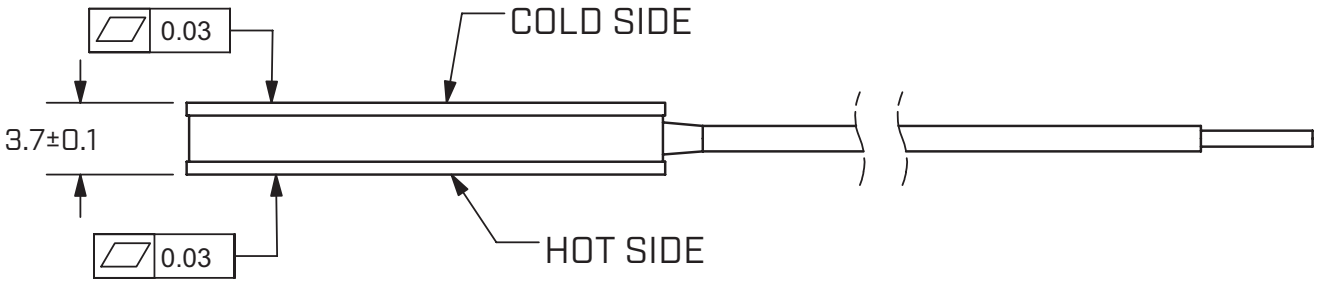
Notes:
1. Maximum voltage at ΔT max and $T_h$=27°C
2. Maximum current to achieve ΔT max
3. Measured by AC 4-terminal method at 25°C
4. Maximum heat absorbed at cold side occurs at $I_{max}$, $V_{max}$, and ΔT=0°C
5. Maximum temperature difference occurs at $I_{max}$, $V_{max}$, and Q=0 W (ΔT max measured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

## MECHANICAL DRAWING

units: mm

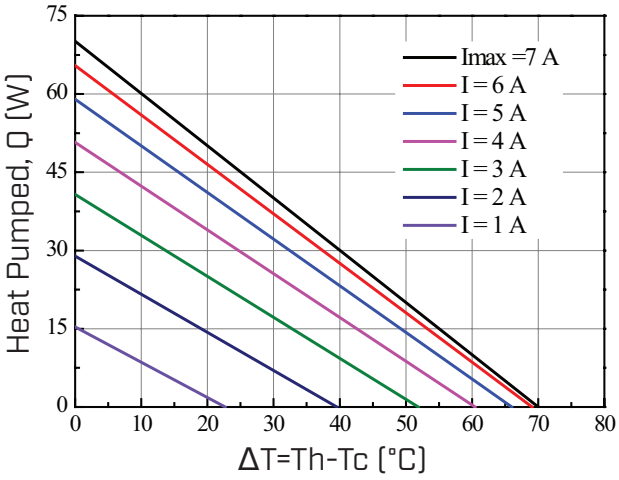
| | MATERIAL | PLATING |
|---|---|---|
| ceramic plate | 96% $AL_2O_3$ | |
| wire leads | UL1726 18 AWG | tin |
| sealer | 704 silicone sealant (between cold and hot side plates) | |
| marking | P/N printed on cold side surface | |



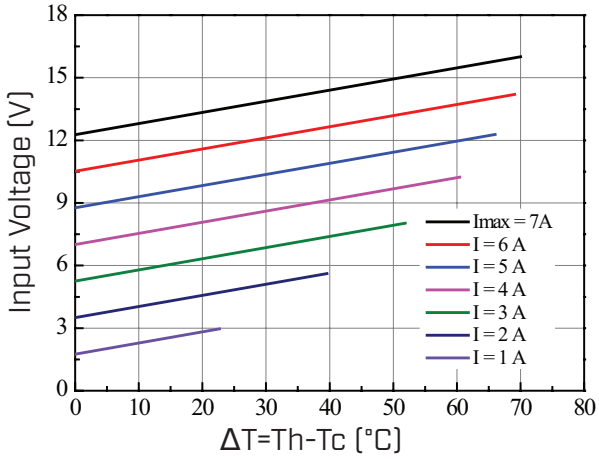



## PERFORMANCE (Th=27°C)

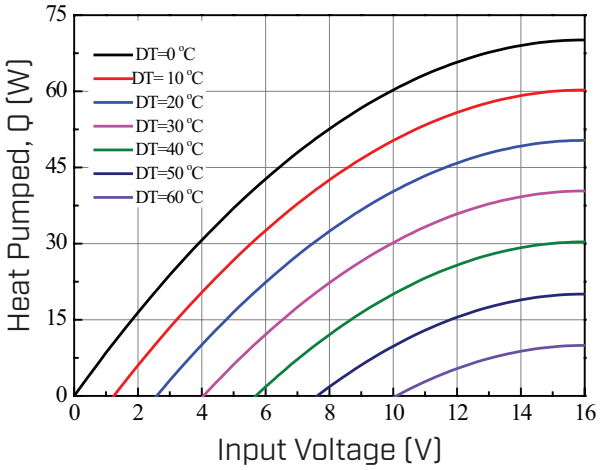
### Heat Pumped, Q Vs. ΔT



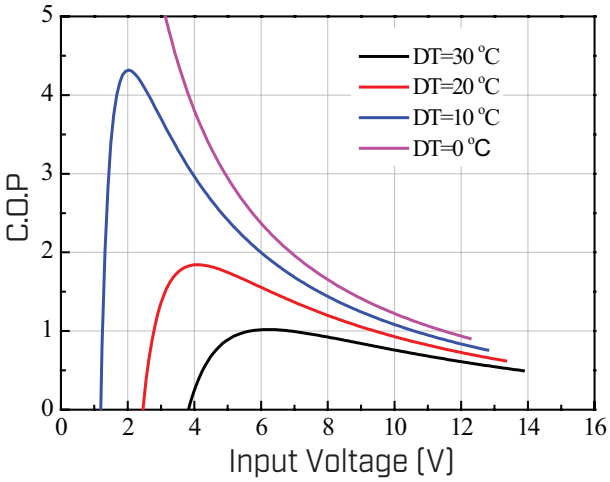

### Input Voltage, V Vs. ΔT



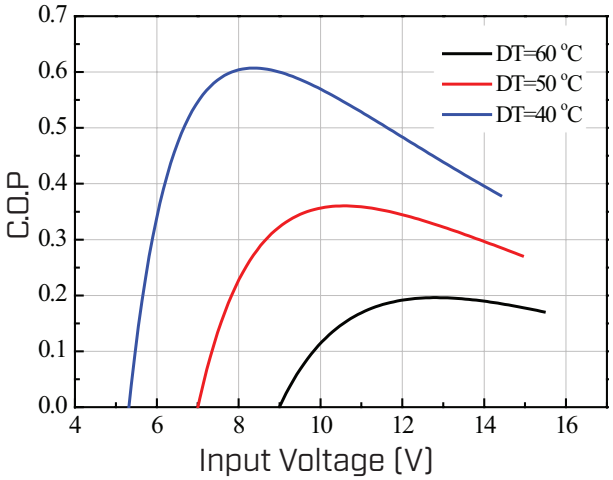

### Heat Pumped, Q Vs. Input Voltage, V




### COP Vs. Input Voltage, V (ΔT=0~30°C)

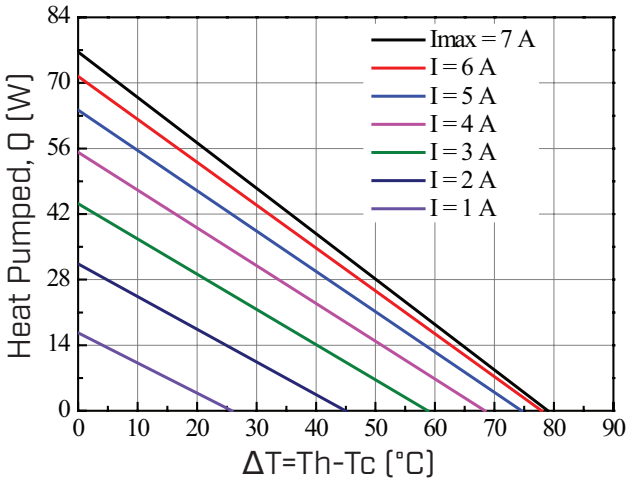



### COP Vs. Input Voltage, V (ΔT=40~60°C)

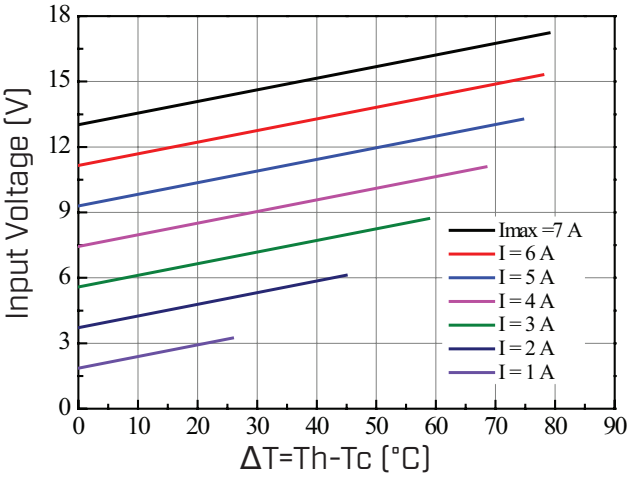


## PERFORMANCE (Th=50°C)

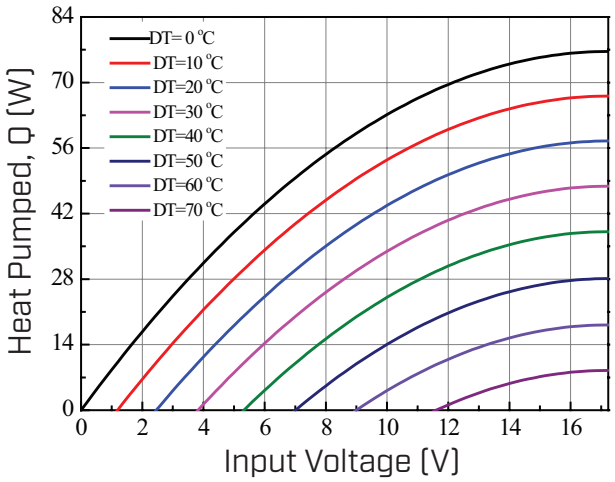
### Heat Pumped, Q Vs. ΔT



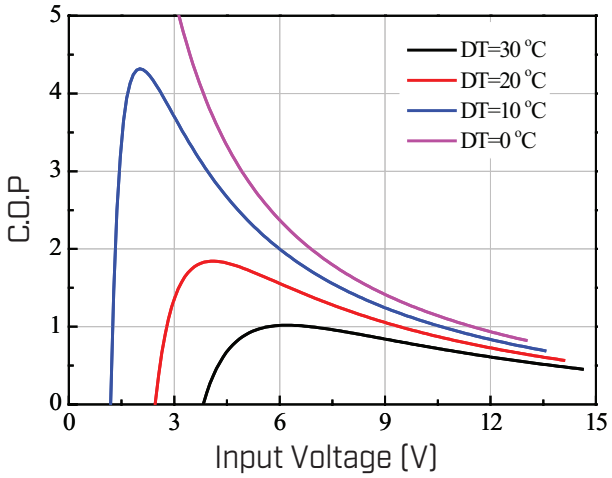

### Input Voltage, V Vs. ΔT



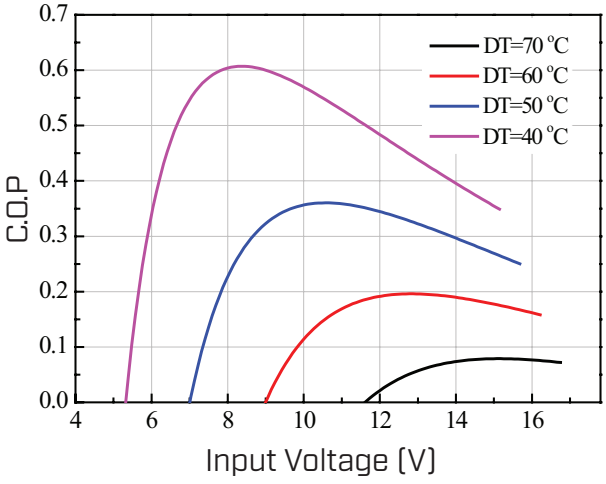

### Heat Pumped, Q Vs. Input Voltage, V




### 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 | 03/28/2025 |

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

same sky

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