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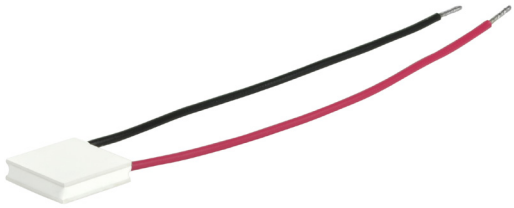
# SERIES: CP70 | DESCRIPTION: PELTIER MODULE

## FEATURES

- arcTEC™ structure on select models
- solid state device
- precise temperature control
- quiet operation



RoHS

## MODEL

| MODEL | input voltage[1] max (Vdc) | input current[2] max (A) | internal resistance[3] typ (Ω±10%) | output Qmax[4] $T_h$=27°C (W) | output Qmax[4] $T_h$=50°C (W) | output ΔTmax[5] $T_h$=27°C (°C) | output ΔTmax[5] $T_h$=50°C (°C) |
|---|---|---|---|---|---|---|---|
| CP70137 | 2.1 | 7.0 | 0.24 | 7.5 | 8.3 | 68 | 75 |
| CP70237 | 3.8 | 7.0 | 0.42 | 13.6 | 15.1 | 68 | 75 |
| CP70301537 | 4.2 | 7.0 | 0.48 | 15.4 | 17.1 | 68 | 75 |
| CP70337[6] | 8.6 | 7.0 | 1.0 | 31.0 | 34.6 | 70 | 77 |
| CP70437[6] | 15.4 | 7.0 | 1.75 | 55.0 | 60.5 | 70 | 77 |

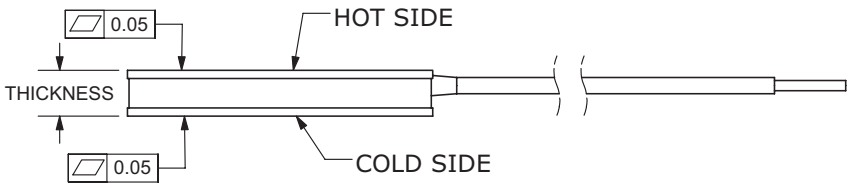
Notes:
1. Maximum voltage at ΔT max and $T_h$=27°C
2. Maximum current to achieve ΔT max
3. Measured by AC 4-terminal method at 25°C
4. Maximum heat absorbed at cold side occurs at $I_{max}$, $V_{max}$, and ΔT=0°C
5. Maximum temperature difference occurs at $I_{max}$, $V_{max}$, and Q=0W (ΔT max measured in a vacuum at 1.3 Pa)
6. Designed with arcTEC™ structure

## SPECIFICATIONS

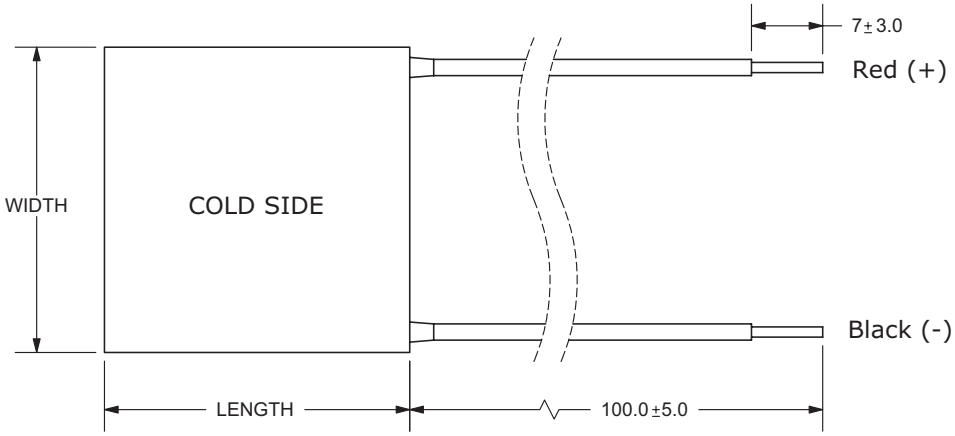
| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| solder melting temperature | connection between thermoelectric pairs | 235 | | | °C |
| assembly compression | | | | 1 | MPa |
| hot side plate | | | | 80 | °C |
| RoHS | yes | | | | |

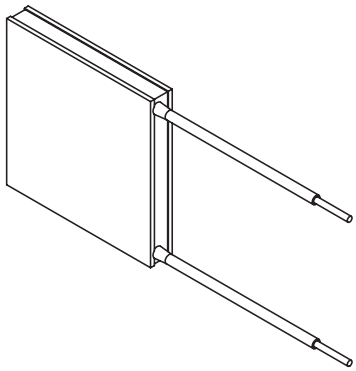
## MECHANICAL DRAWING

units: mm




| | MATERIAL | PLATING |
|---|---|---|
| ceramic plate | 96% $AL_2O_3$ | |
| wire leads | 20 AWG | tin |
| sealer | silicon rubber 703 RTV (between cold and hot side plates) | |
| joint cover | silicon rubber 703 RTV | |
| marking | P/N & S/N printed on cold side surface | |

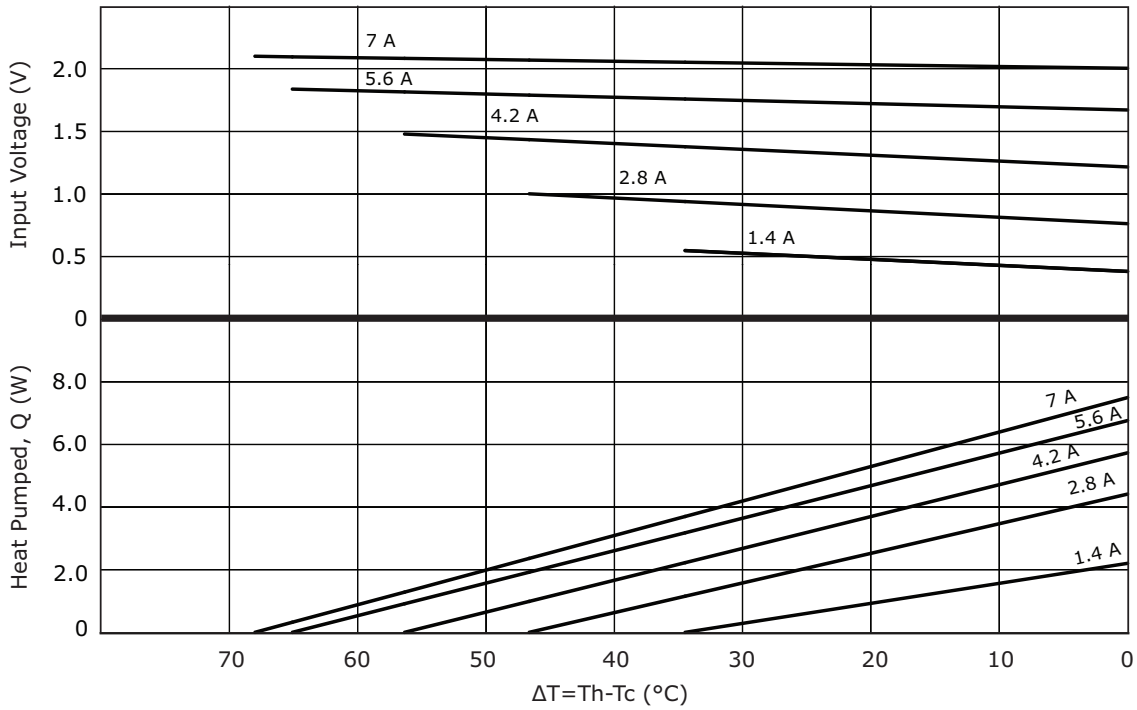


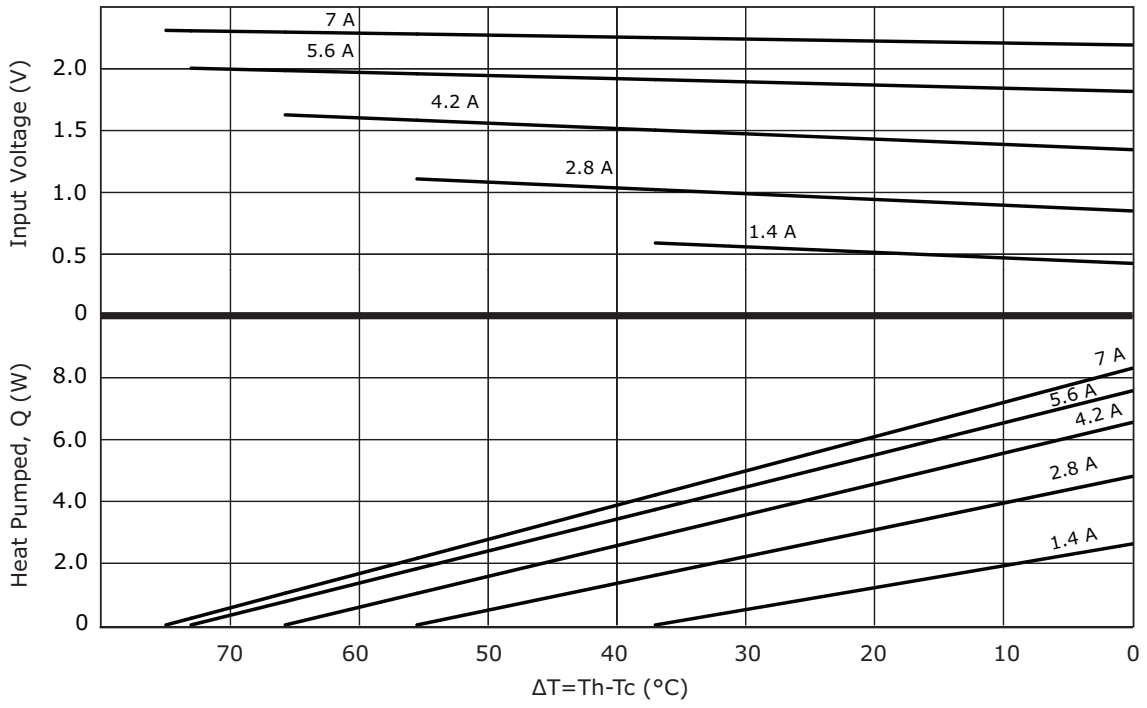
| MODEL NO. | LENGTH (mm) | WIDTH (mm) | THICKNESS (mm) |
|---|---|---|---|
| CP70137 | 15 ±0.3 | 15 ±0.3 | 3.7 ±0.1 |
| CP70237 | 20 ±0.3 | 20 ±0.3 | 3.7 ±0.1 |
| CP70301537 | 30 ±0.3 | 15 ±0.3 | 3.7 ±0.1 |
| CP70337[1] | 30 ±0.3 | 30 ±0.3 | 3.7 ±0.1 |
| CP70437[1] | 40 ±0.3 | 40 ±0.3 | 3.7 ±0.1 |

Notes: 1. Wire lead strip length on models CP70337 & CP70437 is 10 ±3.0 mm.

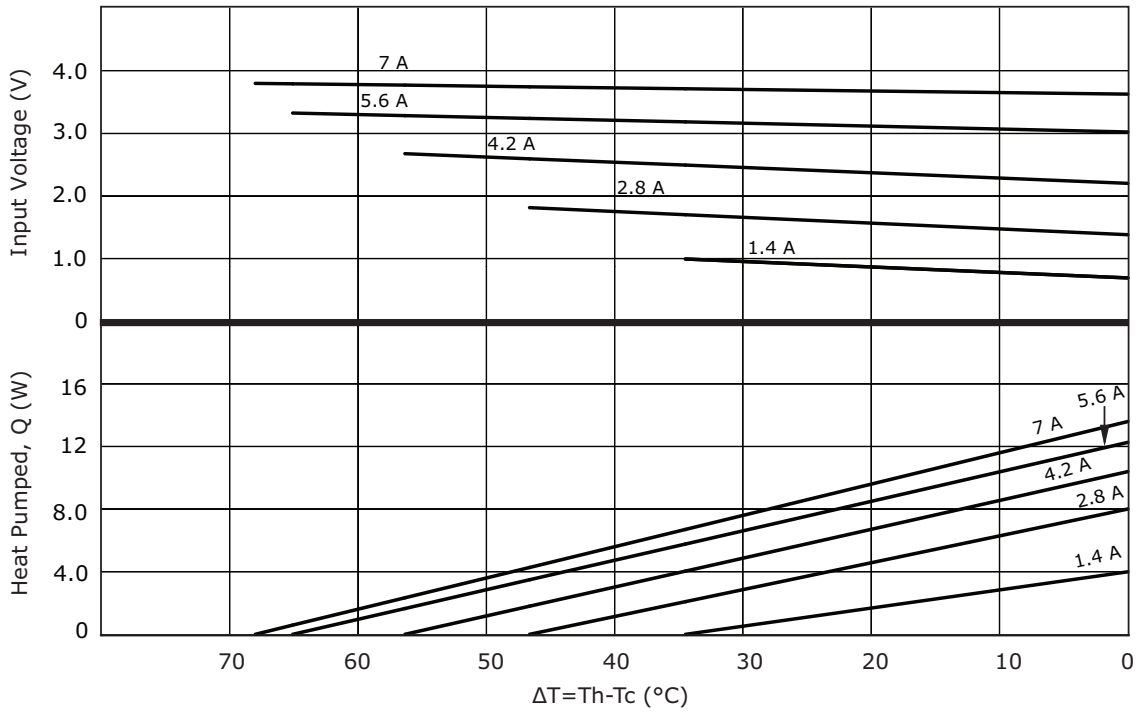
## CP70137 PERFORMANCE (Th=27°C)



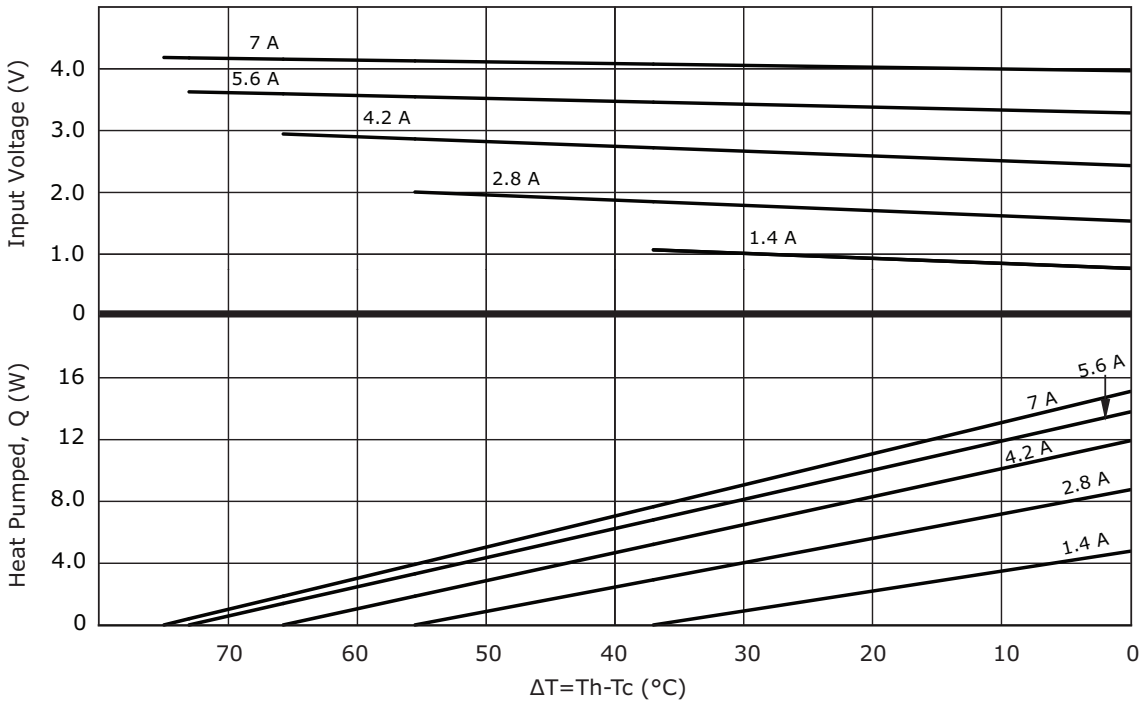

## CP70137 PERFORMANCE (Th=50°C)



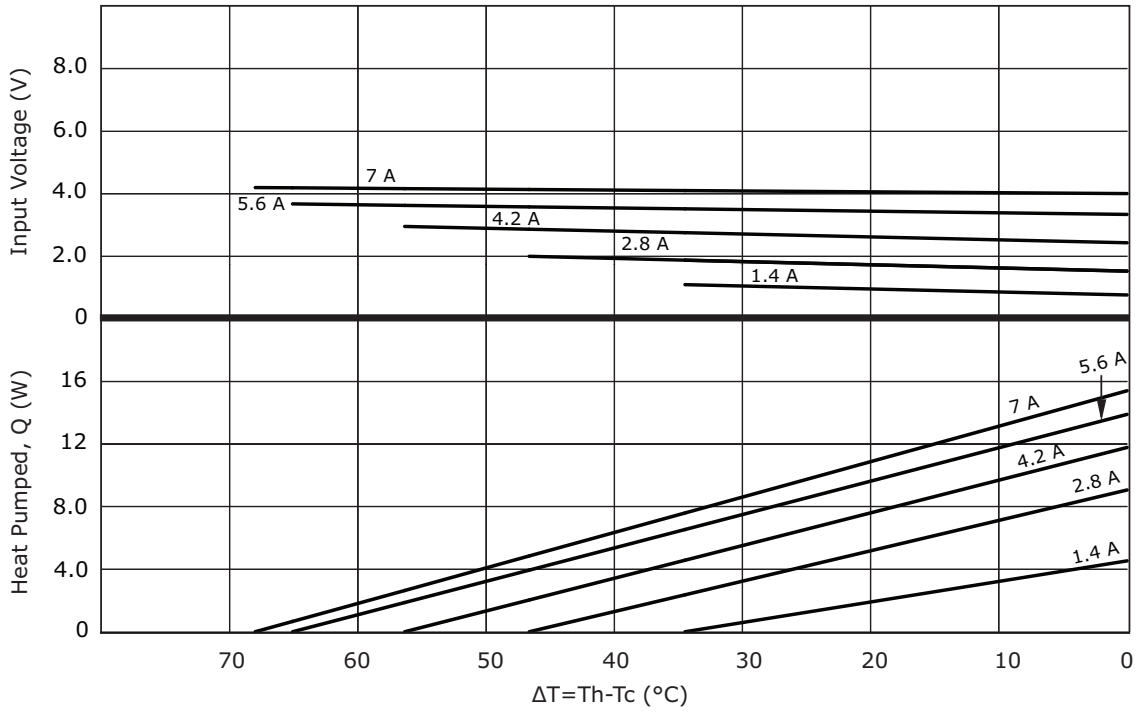
## CP70237 PERFORMANCE (Th=27°C)



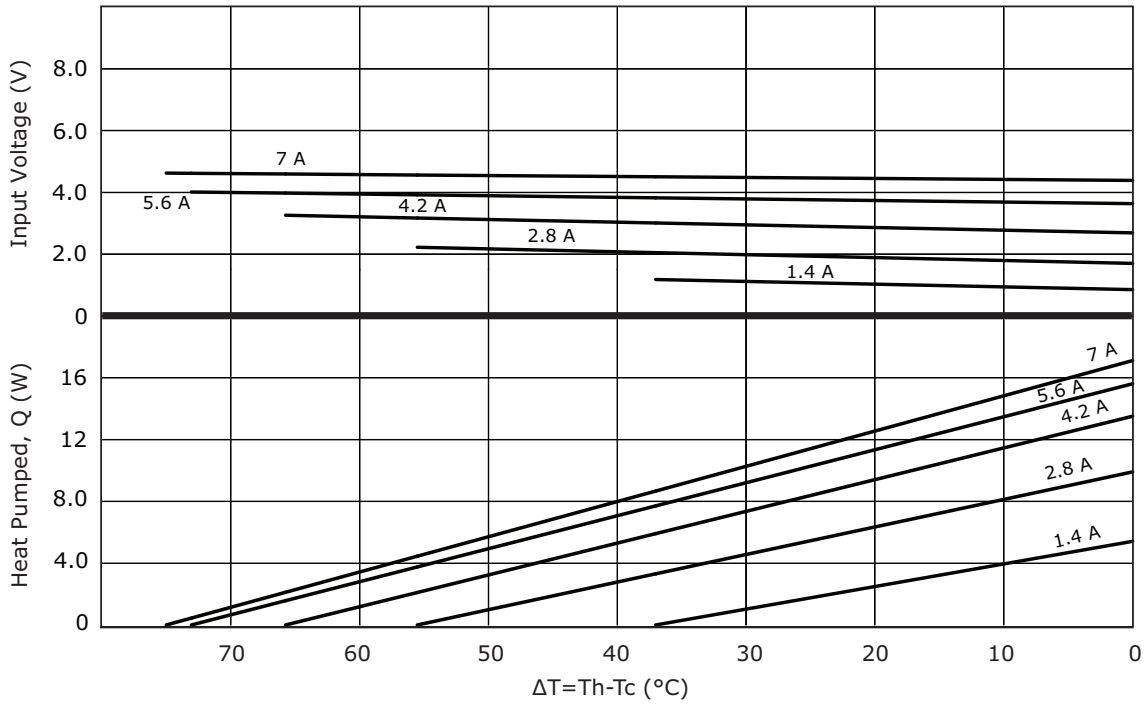

## CP70237 PERFORMANCE (Th=50°C)



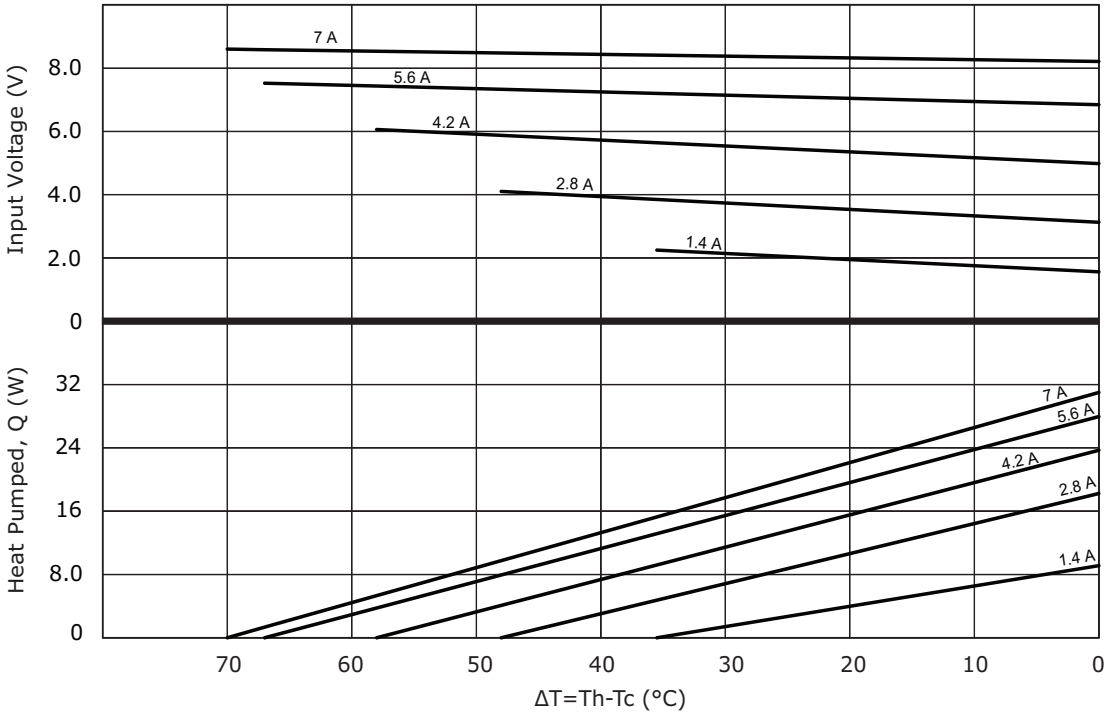
## CP70301537 PERFORMANCE (Th=27°C)



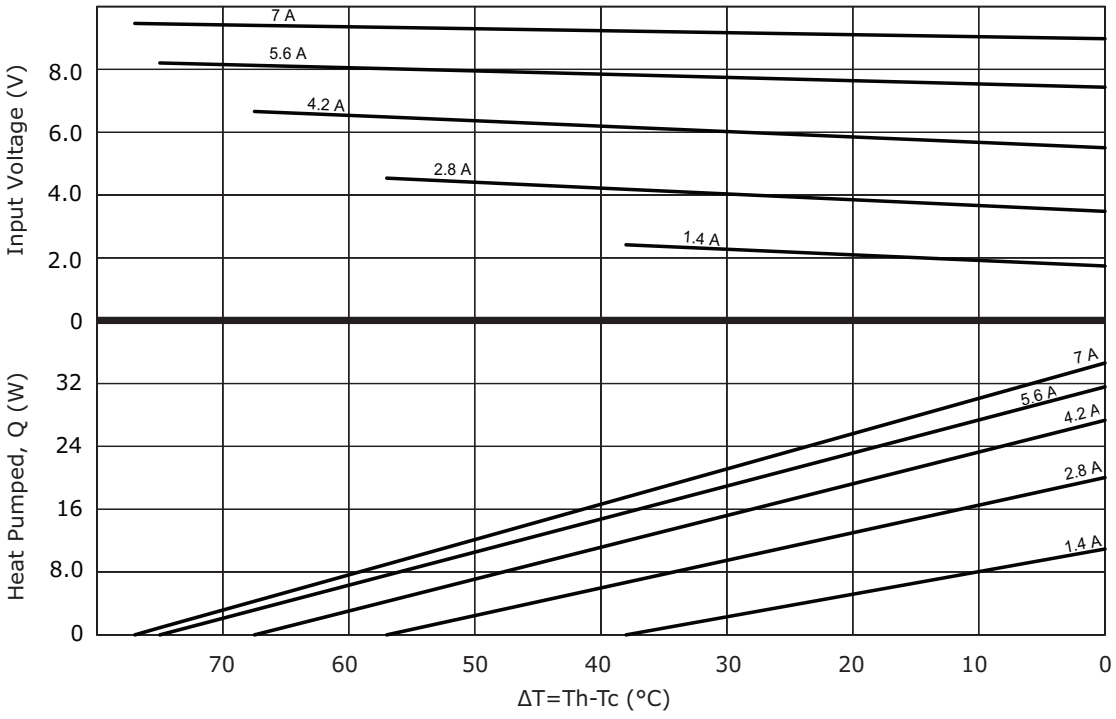

## CP70301537 PERFORMANCE (Th=50°C)



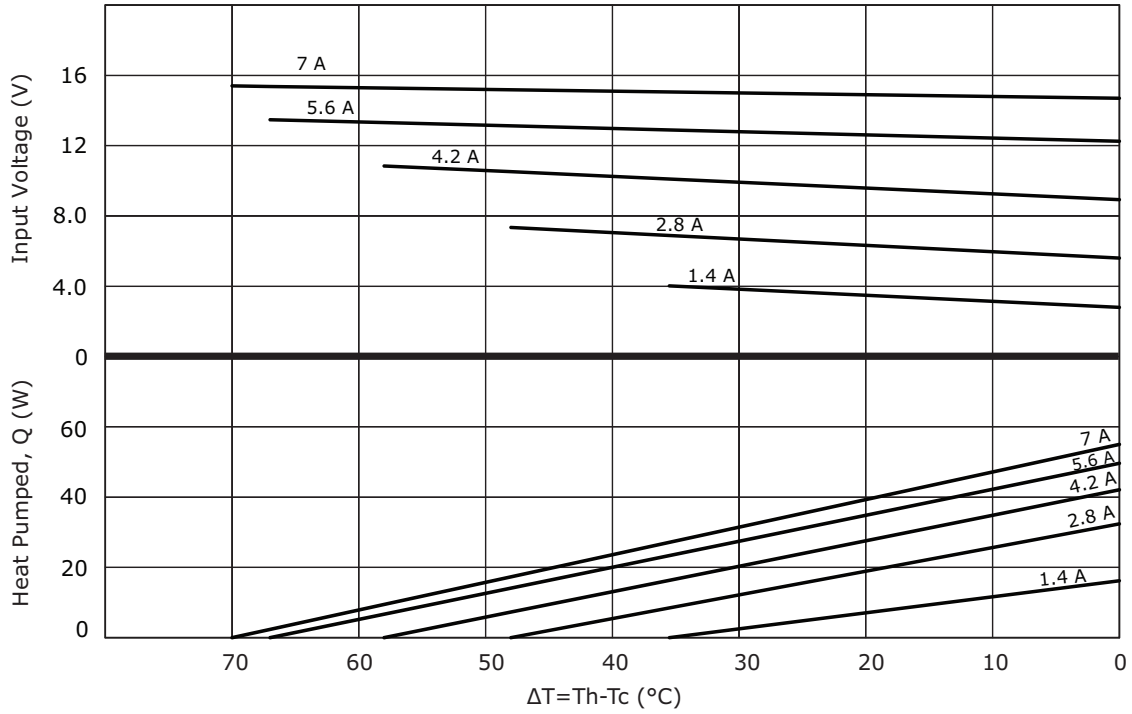
## CP70337 PERFORMANCE (Th=27°C)



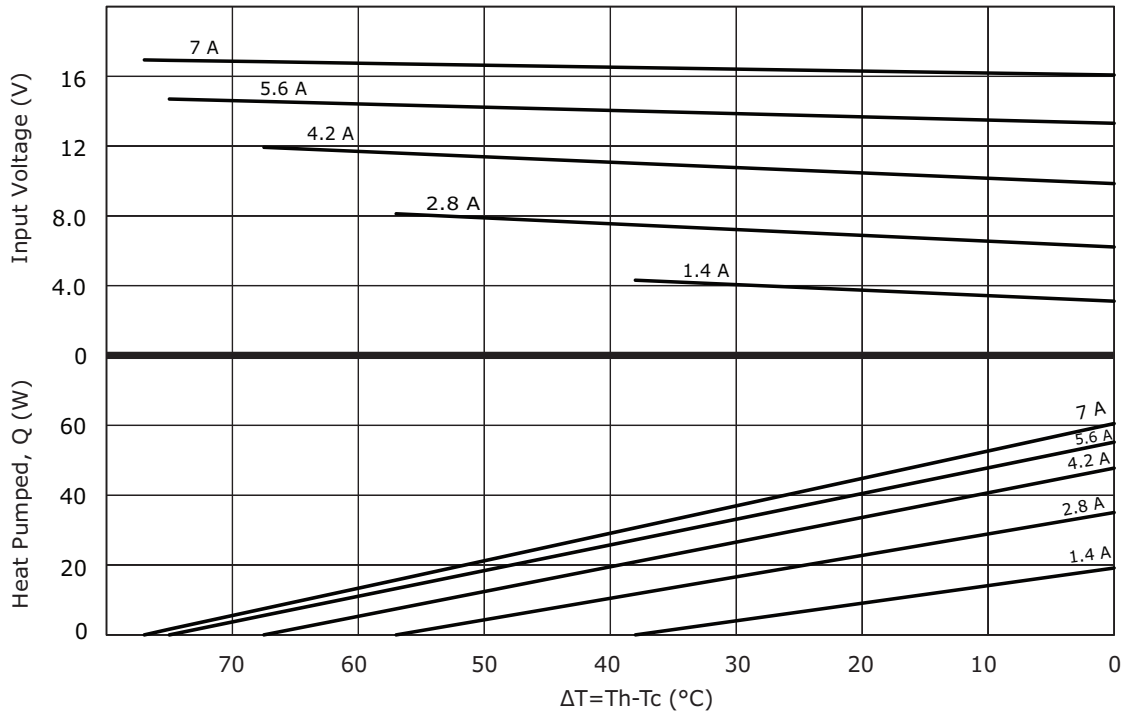

## CP70337 PERFORMANCE (Th=50°C)



## CP70437 PERFORMANCE (Th=27°C)




## CP70437 PERFORMANCE (Th=50°C)



## REVISION HISTORY

| rev. | description | date |
|---|---|---|
| 1.0 | initial release | 09/08/2016 |
| 1.01 | changed models CP70337 & CP70437 to arcTEC™ structure | 12/01/2017 |
| 1.02 | changed thickness of CP70137, CP70237, CP70301537 models | 09/19/2018 |
| 1.03 | brand update | 10/30/2019 |
| 1.04 | logo, datasheet style update | 08/05/2022 |
| 1.05 | CUI Devices rebranded to Same Sky | 09/12/2024 |

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

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