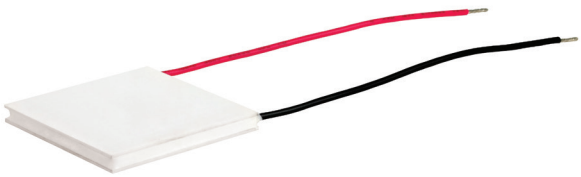
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# SERIES: CP40 | DESCRIPTION: PELTIER MODULE

## 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) |
|---|---|---|---|---|---|---|---|
| CP40136 | 3.8 | 4.0 | 0.80 | 8.1 | 9.0 | 66 | 72 |
| CP40236 | 8.6 | 4.0 | 2.0 | 18.7 | 21.8 | 66 | 72 |
| CP40336 | 15.4 | 4.0 | 3.5 | 33.4 | 37.3 | 66 | 72 |
| CP40147 | 2.1 | 4.0 | 0.42 | 4.2 | 4.6 | 68 | 75 |
| CP40247 | 3.8 | 4.0 | 0.77 | 7.5 | 8.3 | 68 | 75 |
| CP402533[6] | 15.4 | 4.0 | 2.88 | 35.2 | 39.0 | 68 | 75 |
| CP40301547 | 4.2 | 4.0 | 0.87 | 8.4 | 9.2 | 68 | 75 |
| CP40347[6] | 8.6 | 4.0 | 1.76 | 19.6 | 21.6 | 70 | 77 |
| CP40439[6] | 19.5 | 4.0 | 4.18 | 45.0 | 49.5 | 68 | 75 |
| CP404046[6] | 24.1 | 4.0 | 4.94 | 55.7 | 61.2 | 68 | 75 |
| CP40447[6] | 15.4 | 4.0 | 3.15 | 32.0 | 35.2 | 70 | 77 |
| CP4055485[6] | 29.8 | 4.0 | 5.97 | 63.0 | 69.0 | 70 | 77 |

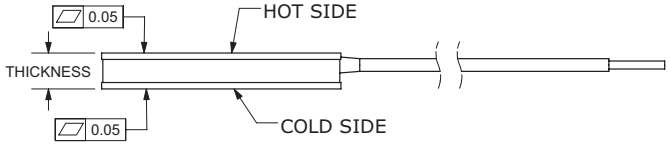
Notes:
1. Maximum voltage at ΔT max and $T_h$=27°C
2. Maximum current to achieve ΔT max
3. Measured by AC 4-terminal method at 25°C
4. Maximum heat absorbed at cold side occurs at $I_{max}$, $V_{max}$, and ΔT=0°C
5. Maximum temperature difference occurs at $I_{max}$, $V_{max}$, and Q=0W (ΔT max measured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

## SPECIFICATIONS

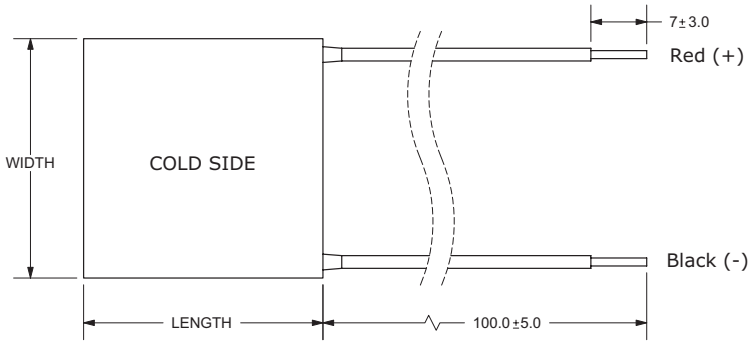
| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| solder melting temperature | connection between thermoelectric pairs<br>CP40347, CP40447, CP40147, CP40247, CP402533<br>CP40301547, CP404046, CP40439, CP4055485<br>all other models | <br><br>235<br>138 | | | <br><br>°C<br>°C |
| assembly compression | | | | 1 | MPa |
| RoHS | yes | | | | |

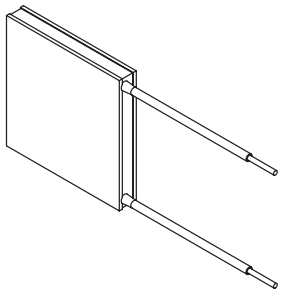
## MECHANICAL DRAWING

units: mm




| | MATERIAL | PLATING |
|---|---|---|
| ceramic plate | 96% $AL_2O_3$ | |
| wire leads (3.3 & 3.6 mm models) | 22 AWG | tin |
| wire leads (all other models) | 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 | |

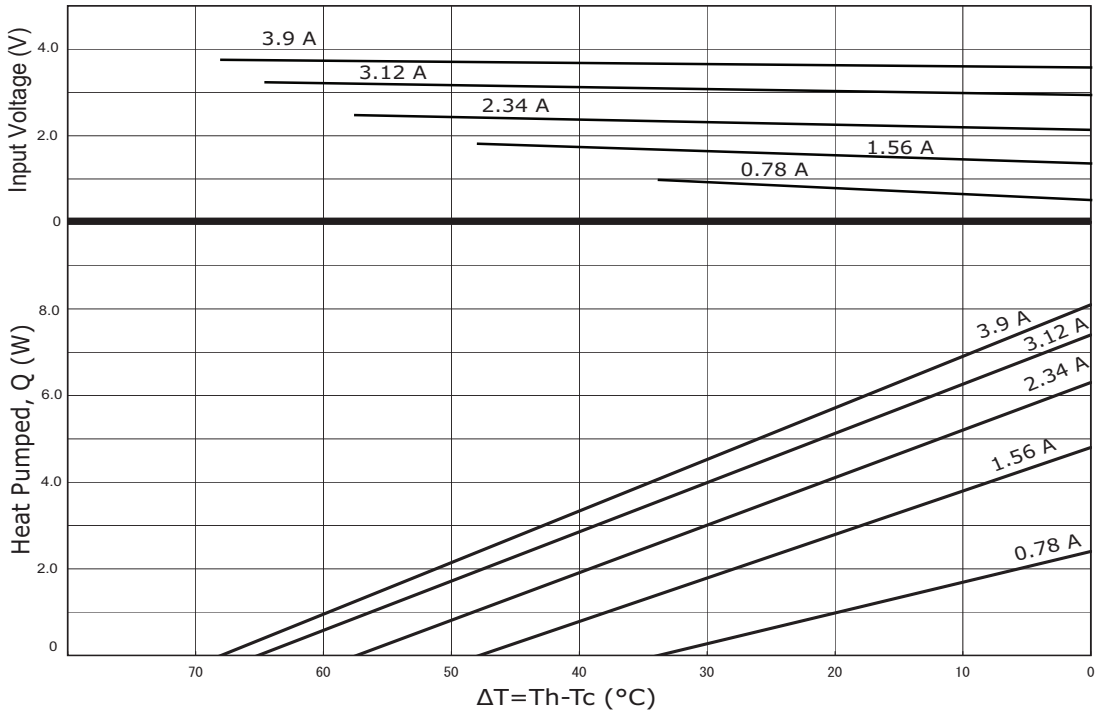


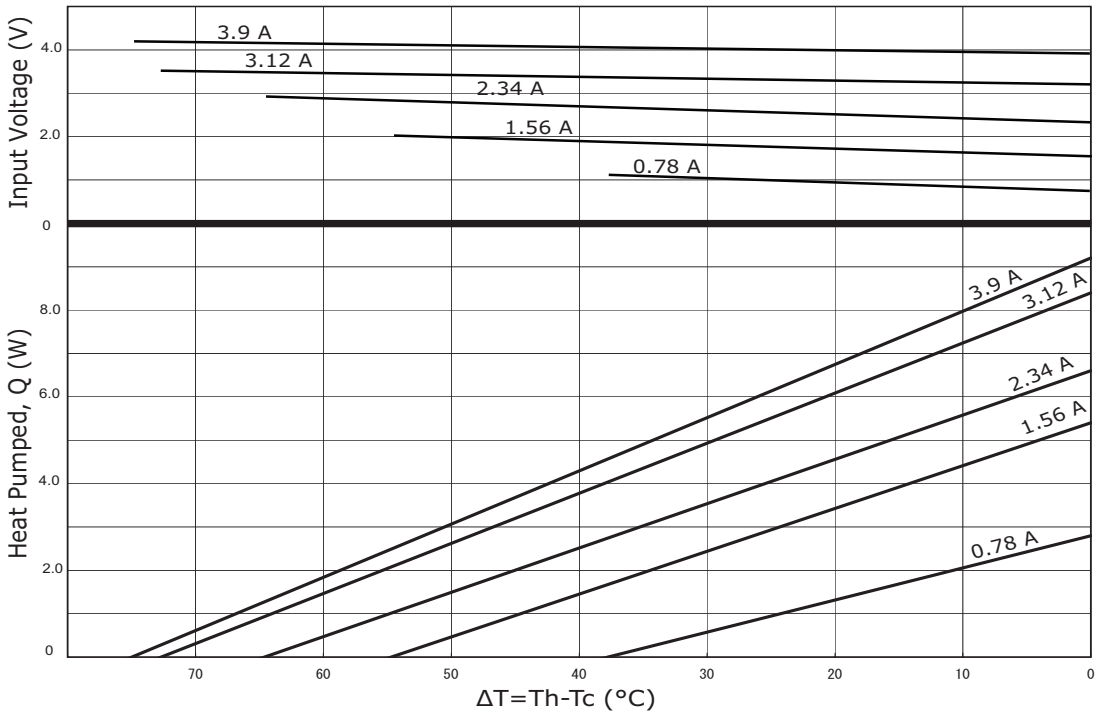
| MODEL NO. | LENGTH (mm) | WIDTH (mm) | THICKNESS (mm) |
|---|---|---|---|
| CP40136 | 15 ±0.3 | 15 ±0.3 | 3.6 ±0.1 |
| CP40236 | 20 ±0.3 | 20 ±0.3 | 3.6 ±0.1 |
| CP40336 | 30 ±0.3 | 30 ±0.3 | 3.6 ±0.1 |
| CP40147 | 15 ±0.3 | 15 ±0.3 | 4.6 ±0.1 |
| CP40247 | 20 ±0.3 | 20 ±0.3 | 4.6 ±0.1 |
| CP402533[1] | 25 ±0.3 | 25 ±0.3 | 3.3 ±0.1 |
| CP40301547 | 30 ±0.3 | 15 ±0.3 | 4.6 ±0.1 |
| CP40347[1] | 30 ±0.3 | 30 ±0.3 | 4.6 ±0.1 |
| CP40439[1] | 40 ±0.3 | 40 ±0.3 | 3.9 ±0.1 |
| CP404046 | 40 ±0.3 | 40 ±0.3 | 4.6 ±0.1 |
| CP40447[1] | 40 ±0.3 | 40 ±0.3 | 4.6 ±0.1 |
| CP4055485[1] | 55 ±0.3 | 55 ±0.3 | 4.85 ±0.1 |

Notes: 1. Wire lead strip length on models CP40347, CP40447, CP40439, CP402533, & CP4055485 is 10 ±3.0 mm.

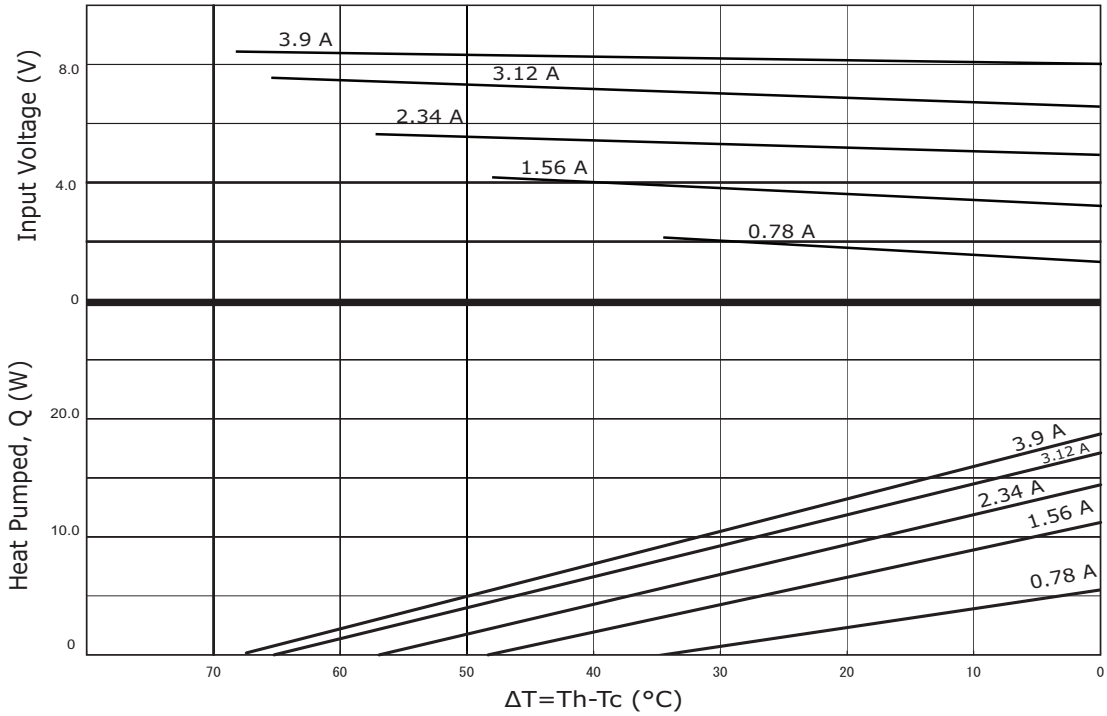
## CP40136 PERFORMANCE (Th=27°C)



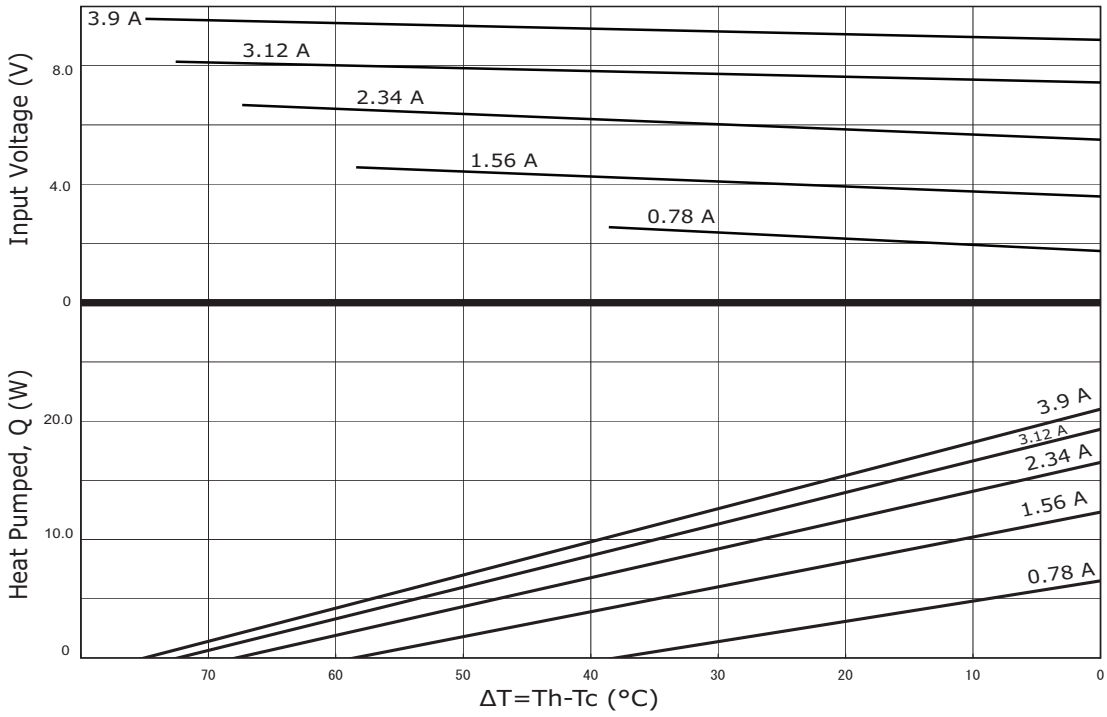

## CP40136 PERFORMANCE (Th=50°C)



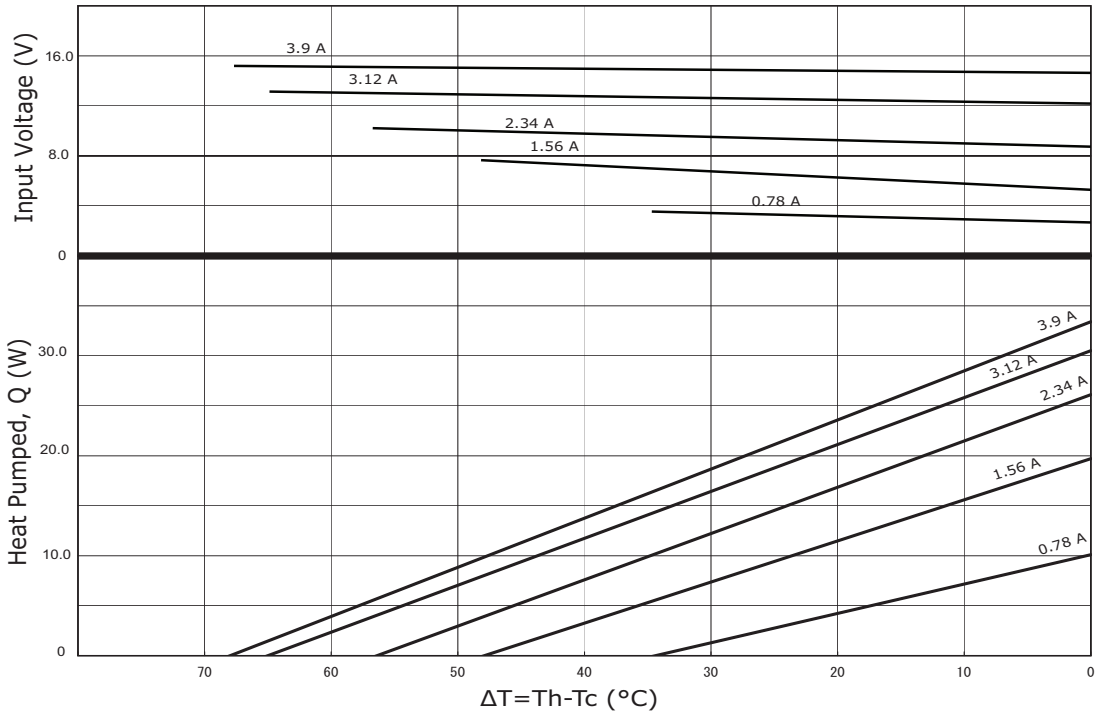
## CP40236 PERFORMANCE (Th=27°C)



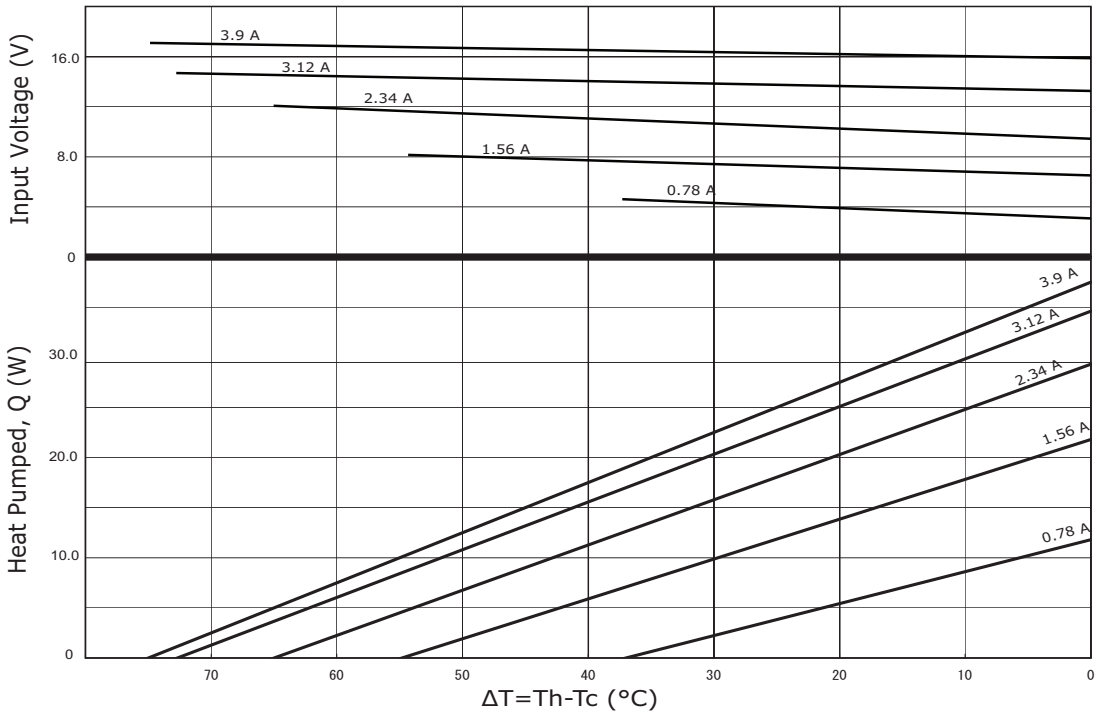

## CP40236 PERFORMANCE (Th=50°C)



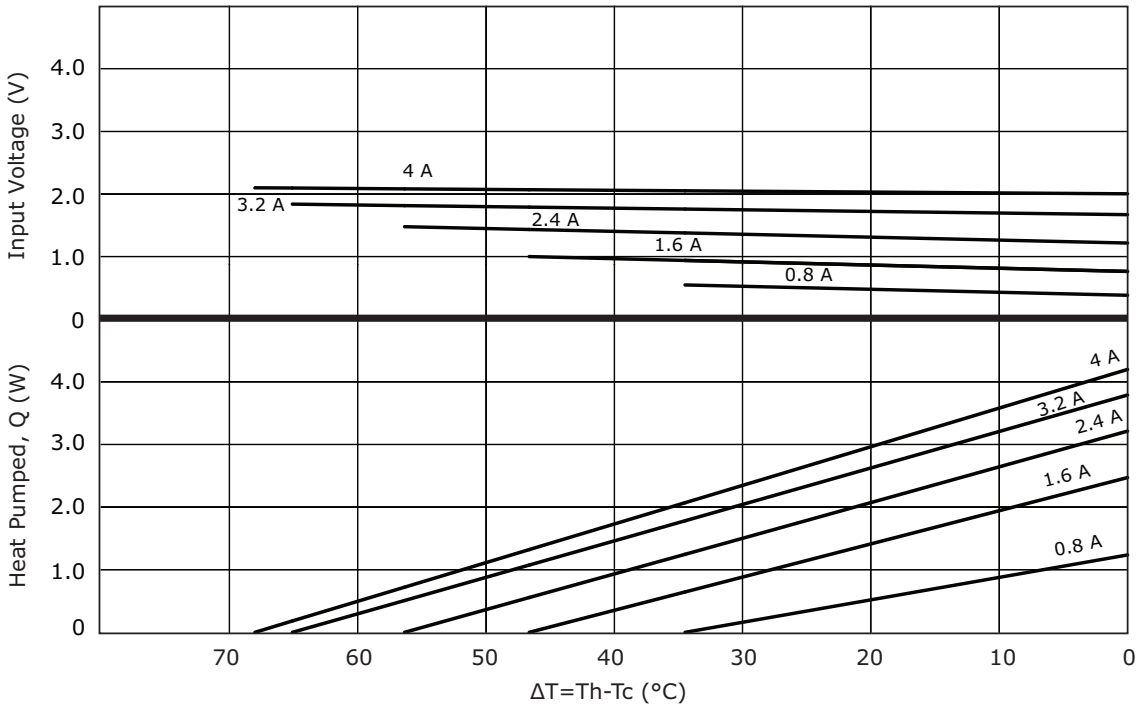
## CP40336 PERFORMANCE (Th=27°C)



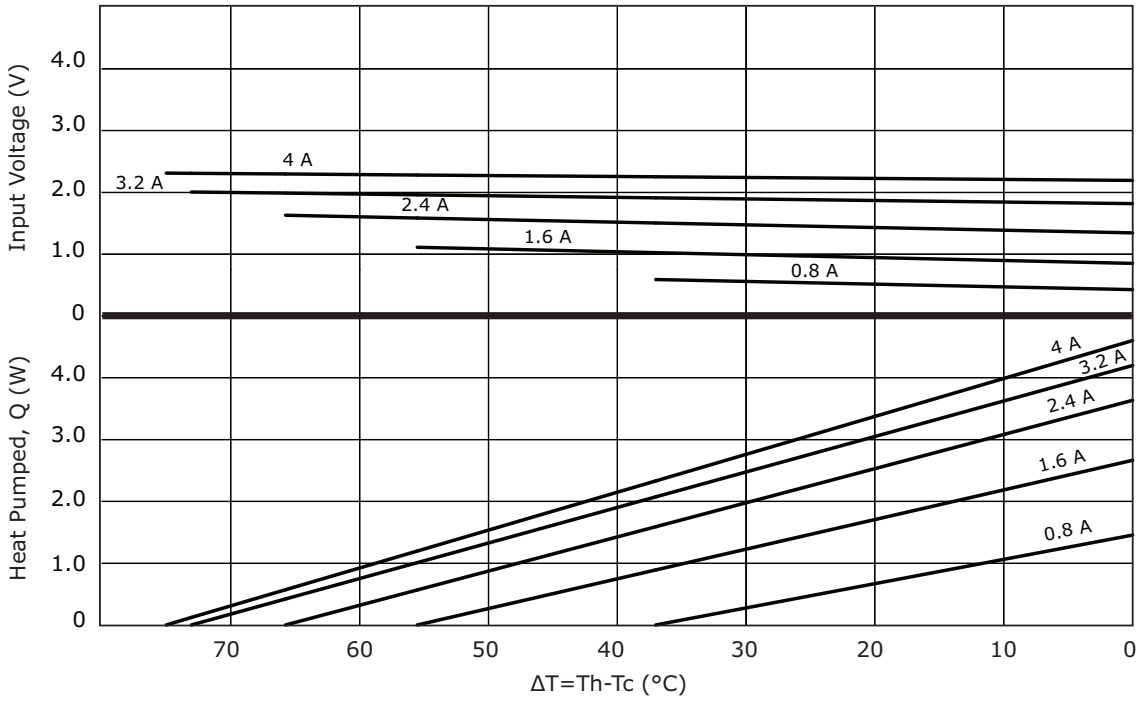

## CP40336 PERFORMANCE (Th=50°C)



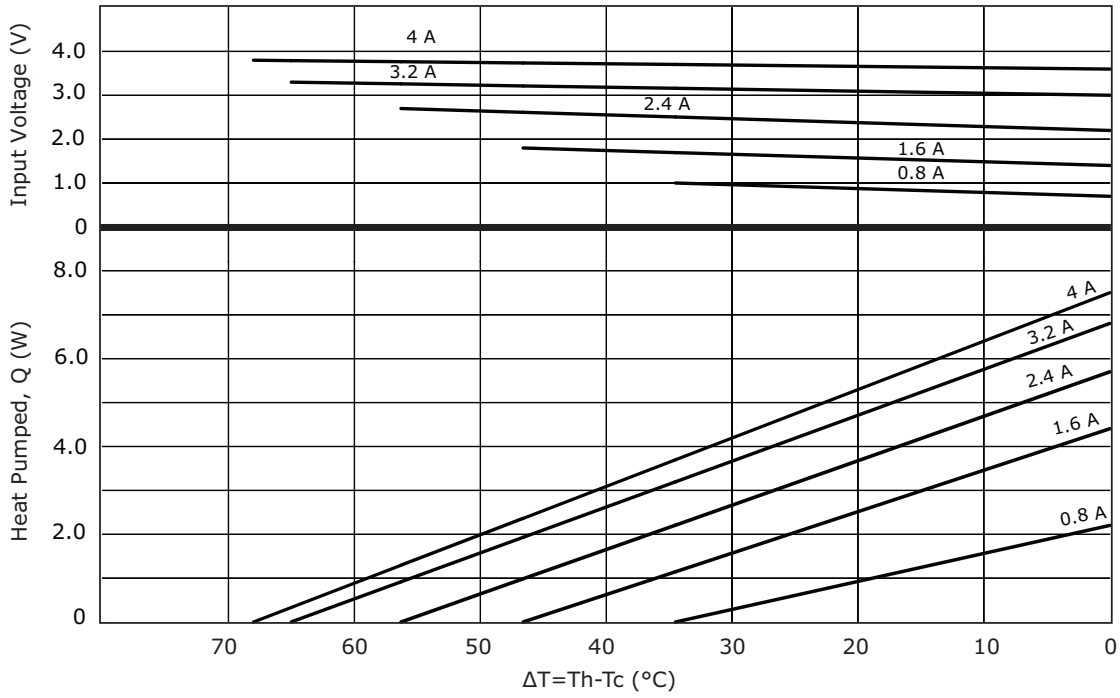
## CP40147 PERFORMANCE (Th=27°C)



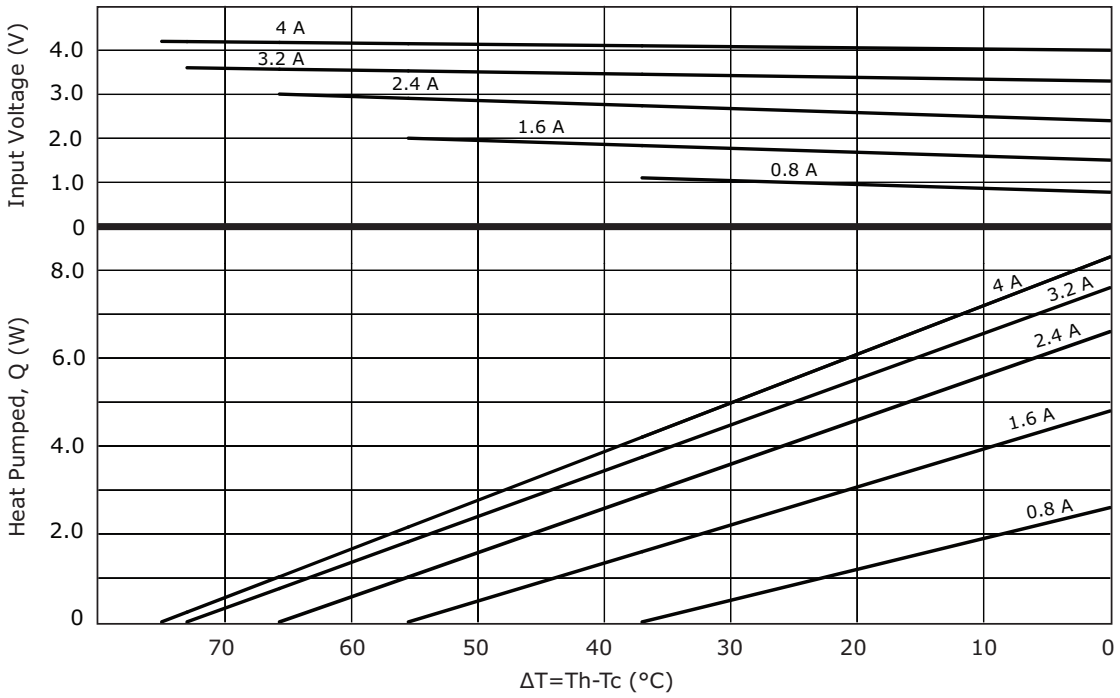

## CP40147 PERFORMANCE (Th=50°C)



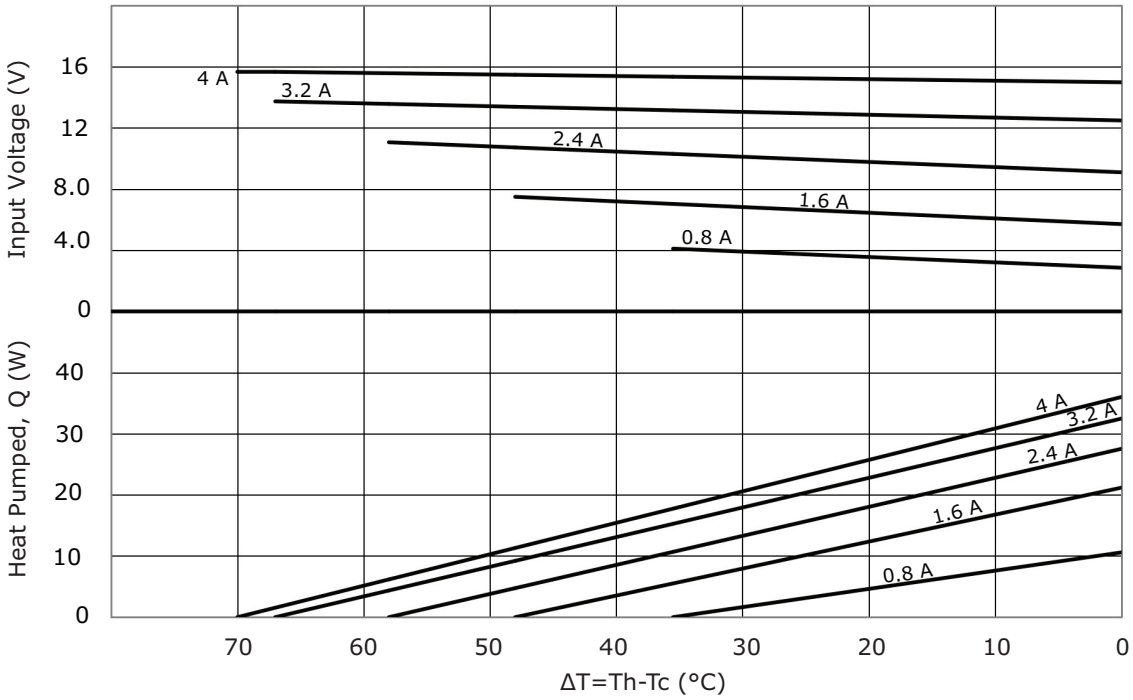
## CP40247 PERFORMANCE (Th=27°C)



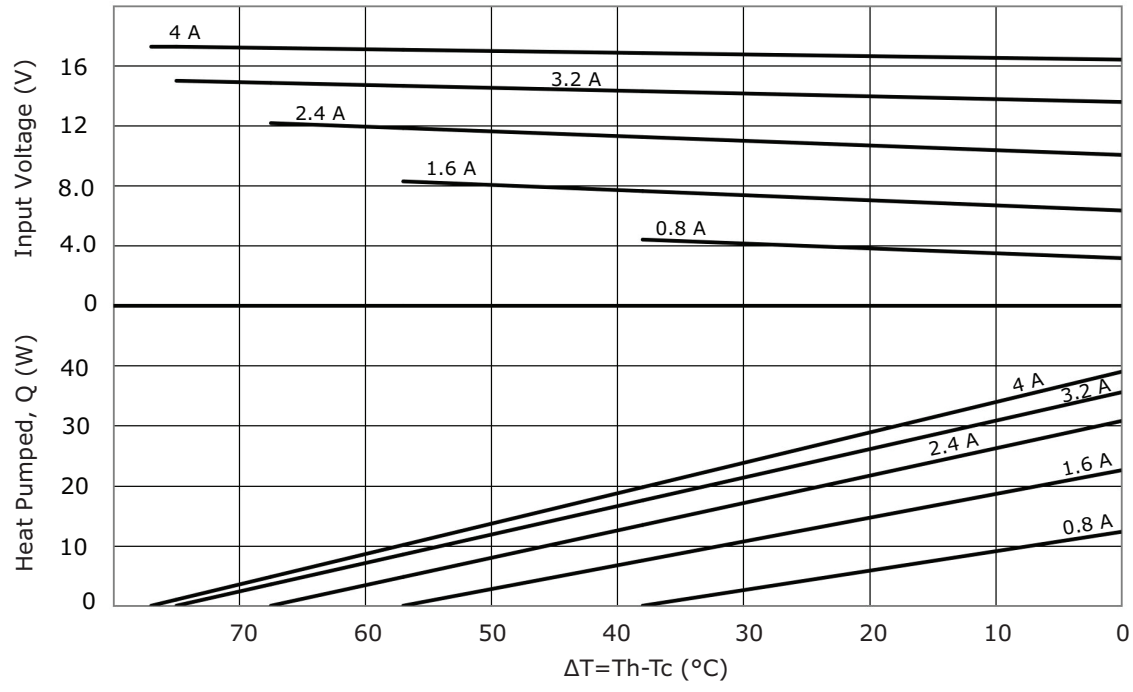

## CP40247 PERFORMANCE (Th=50°C)



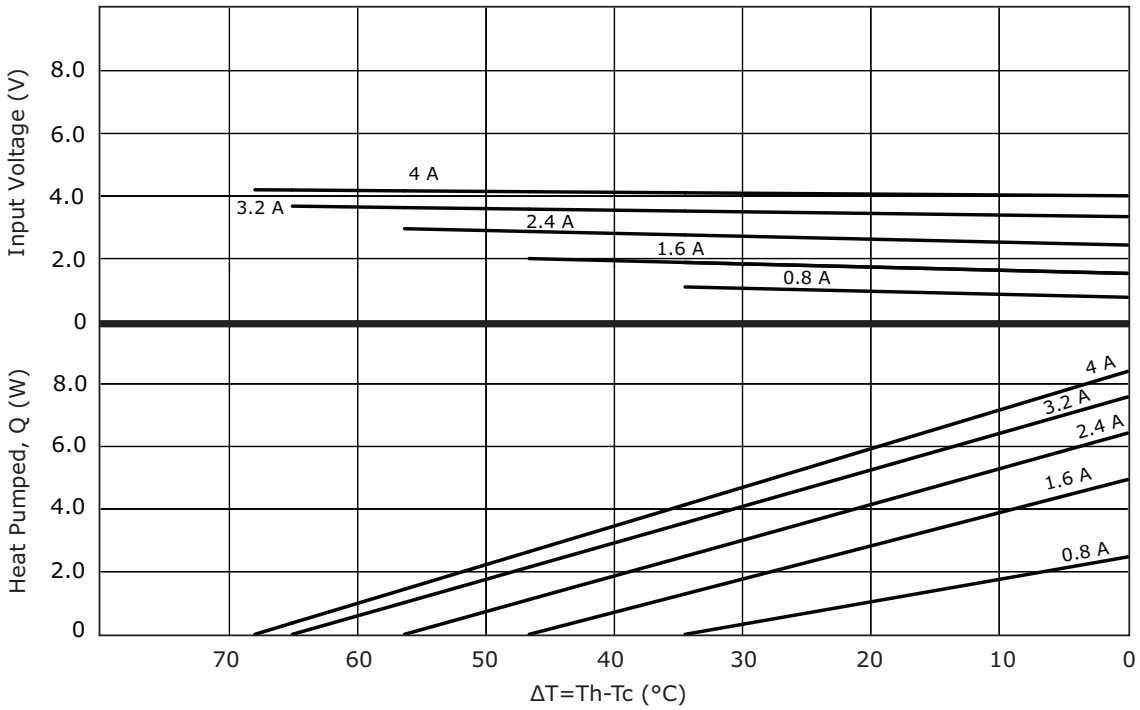
## CP402533 PERFORMANCE (Th=27°C)



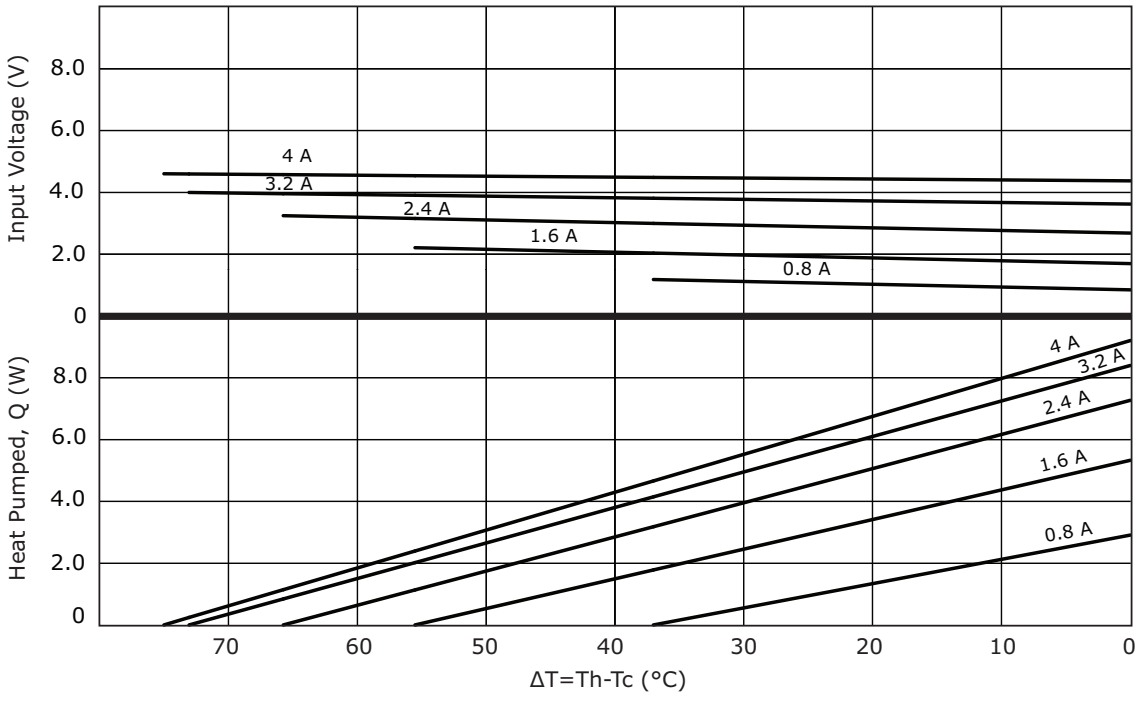

## CP402533 PERFORMANCE (Th=50°C)



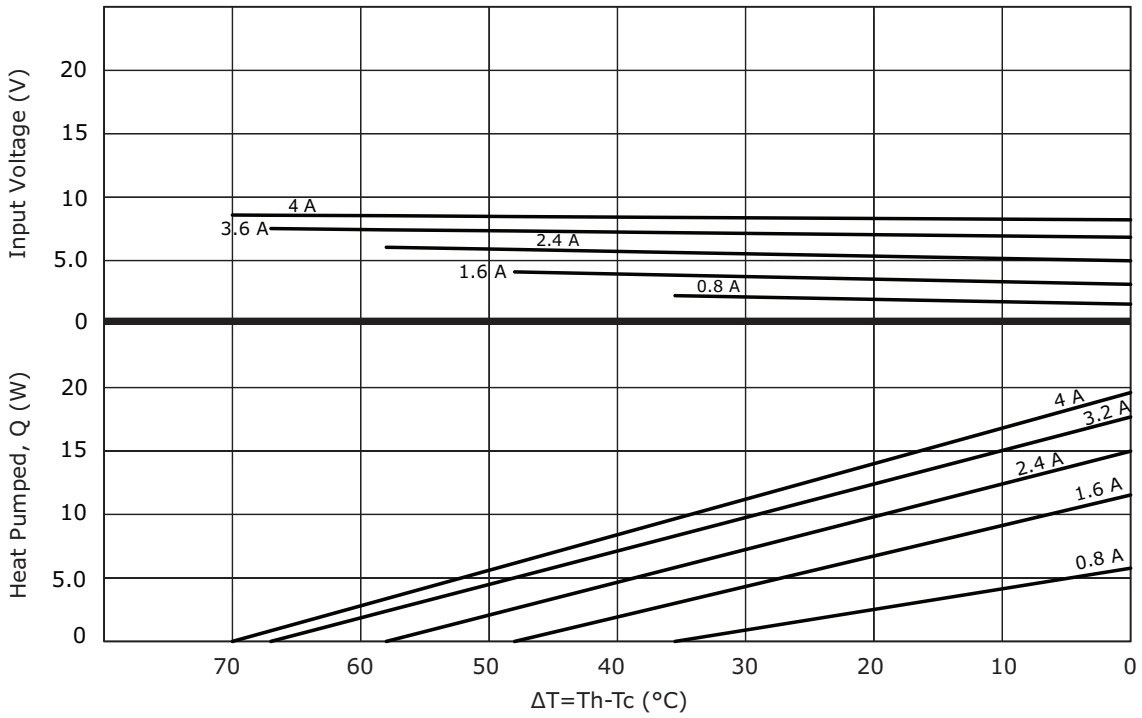
## CP40301547 PERFORMANCE (Th=27°C)



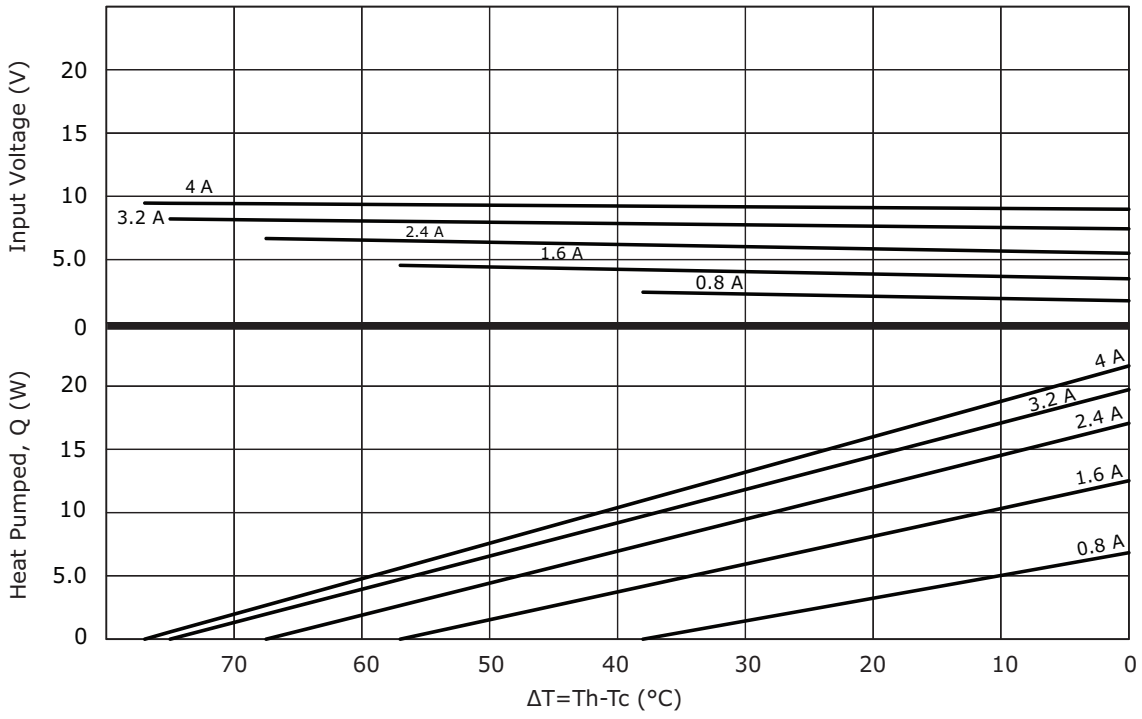

## CP40301547 PERFORMANCE (Th=50°C)



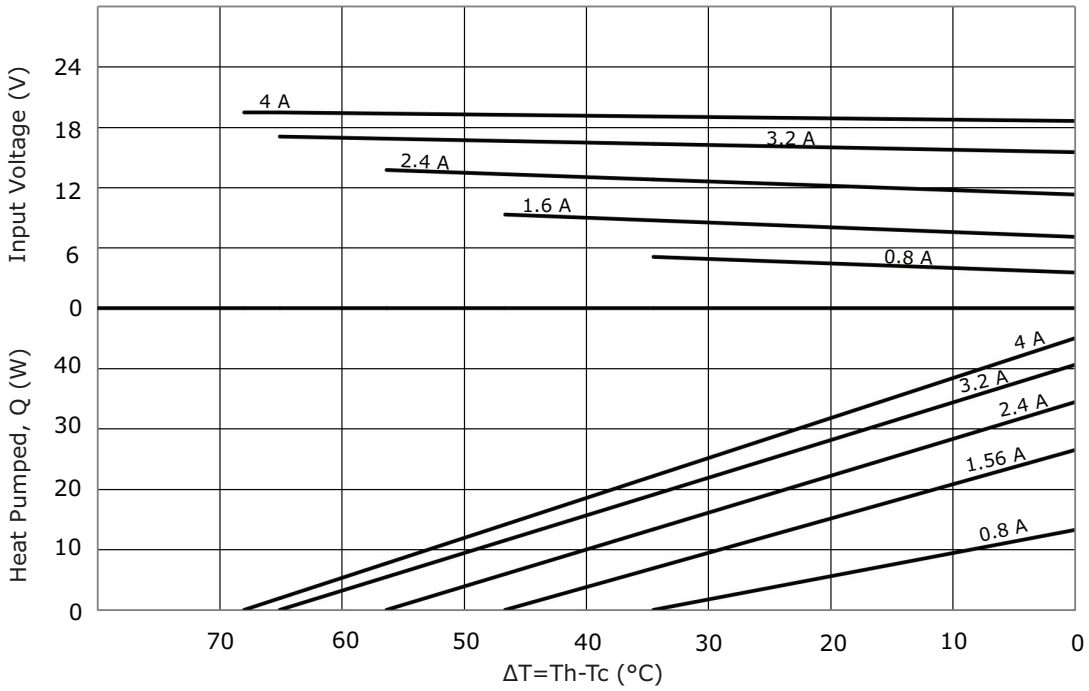
## CP40347 PERFORMANCE (Th=27°C)



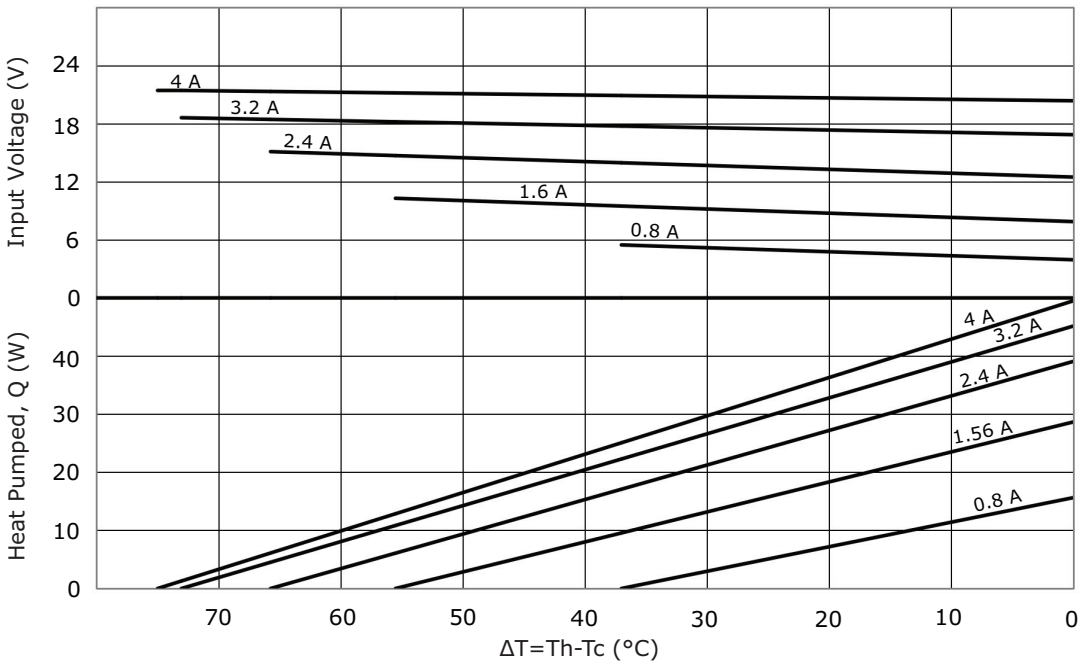

## CP40347 PERFORMANCE (Th=50°C)



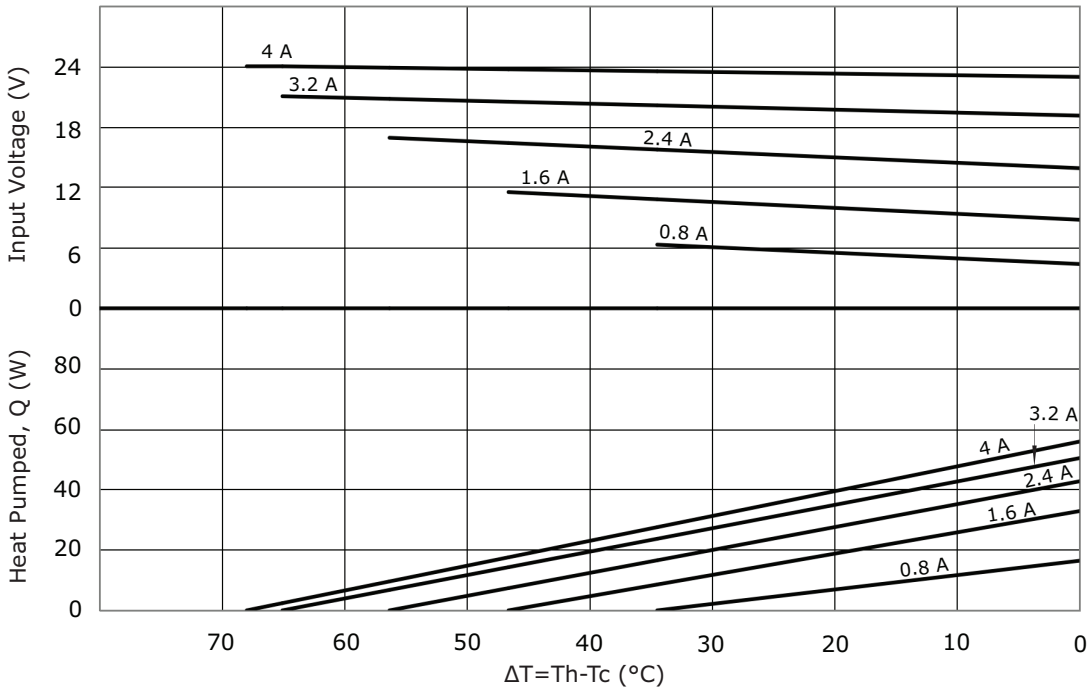
## CP40439 PERFORMANCE (Th=27°C)



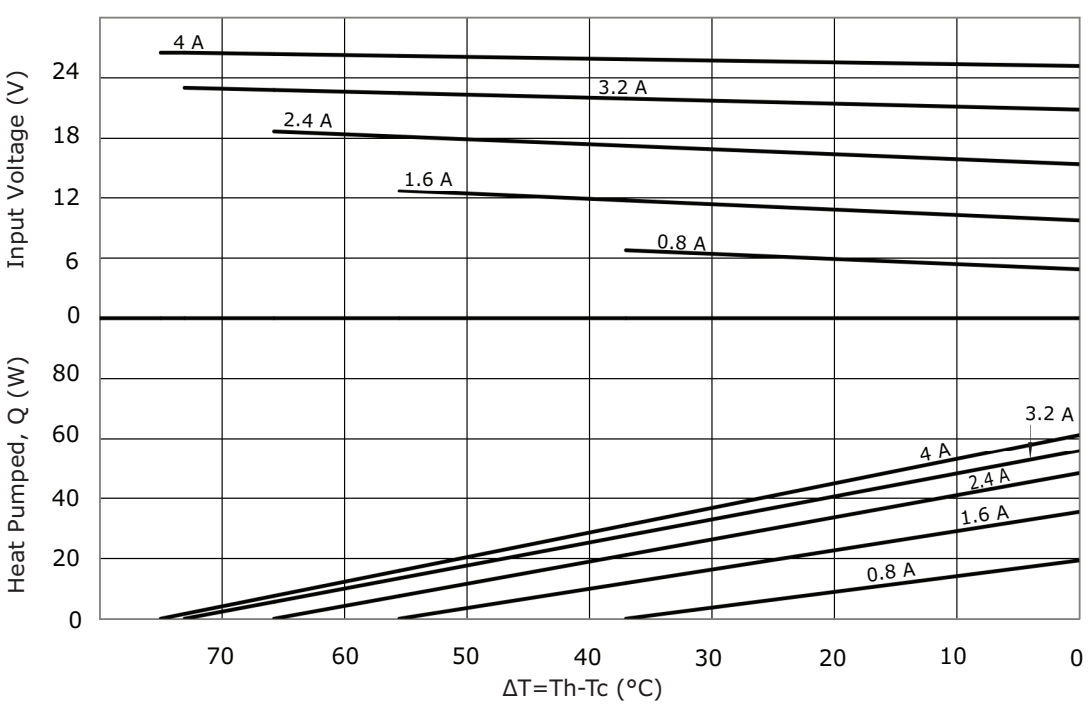

## CP40439 PERFORMANCE (Th=50°C)



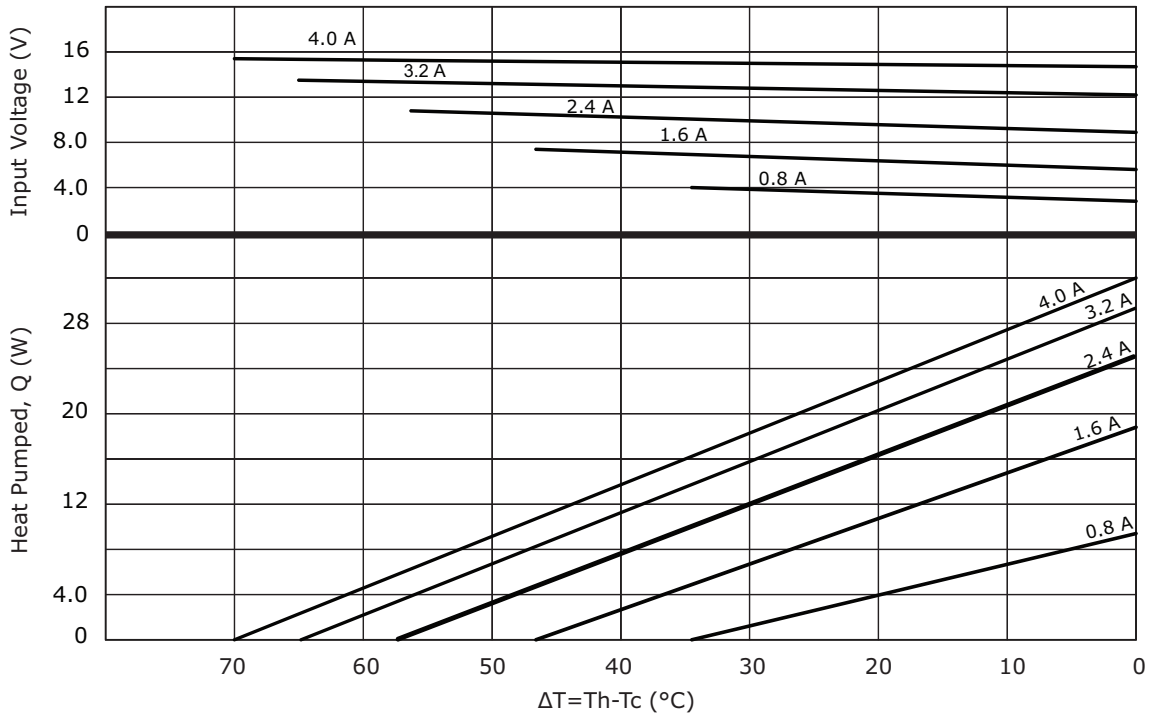
## CP404046 PERFORMANCE (Th=27°C)



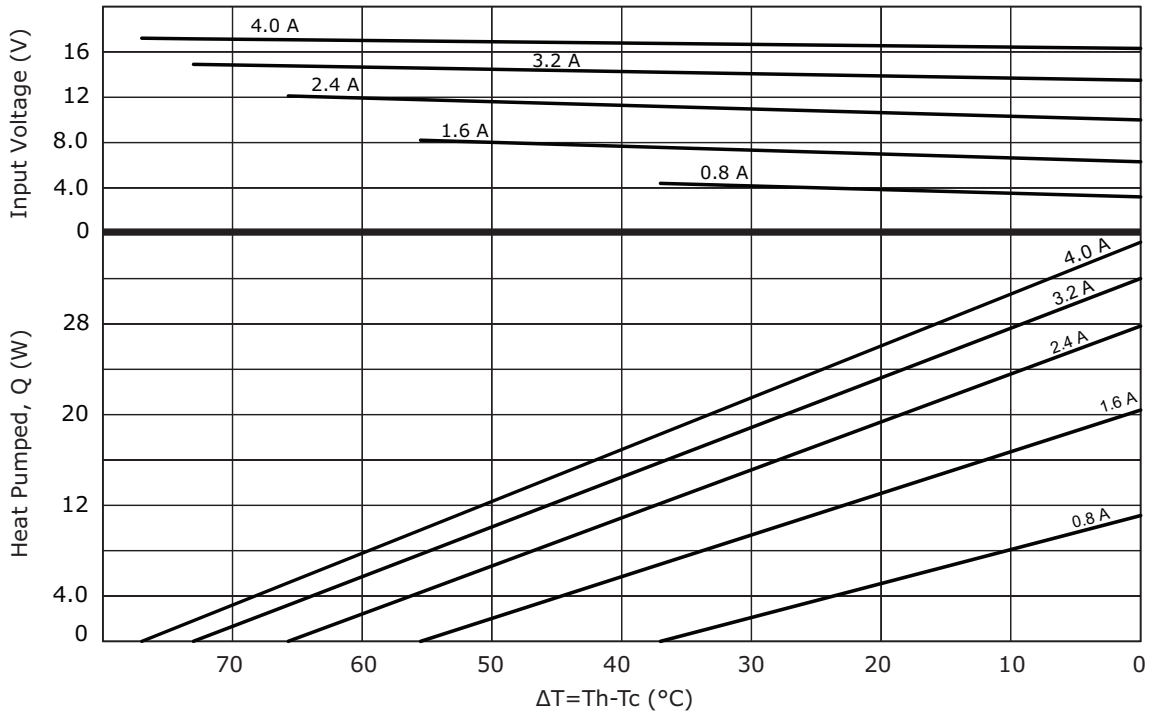

## CP404046 PERFORMANCE (Th=50°C)



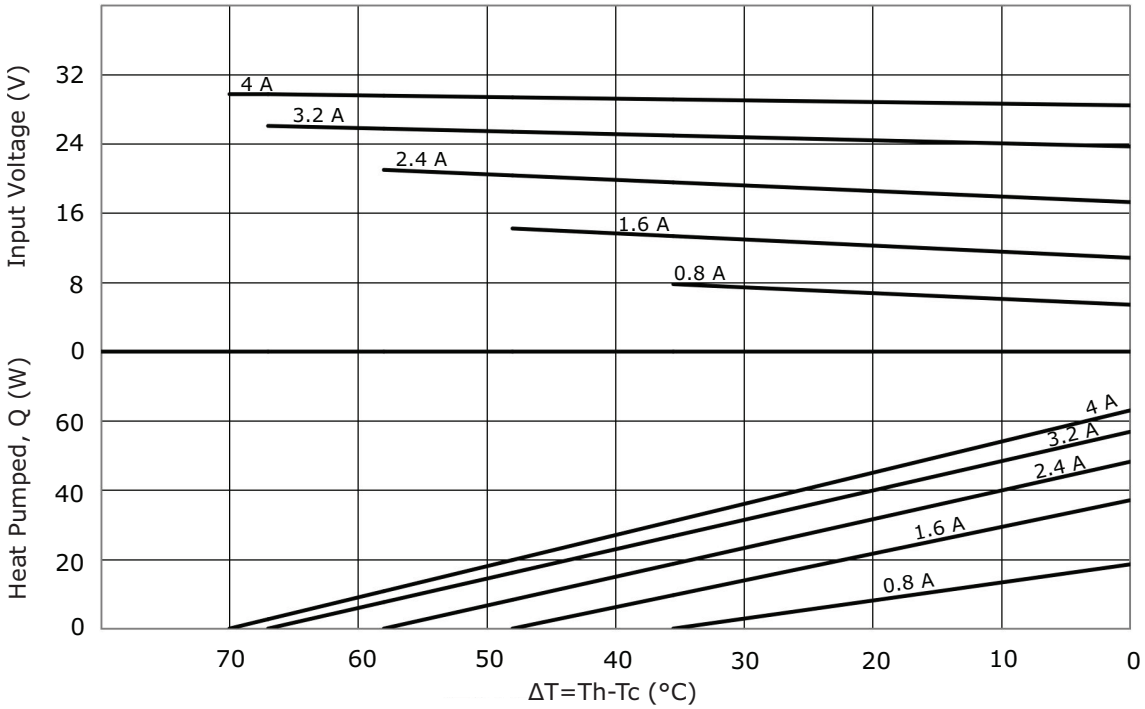
## CP40447 PERFORMANCE (Th=27°C)



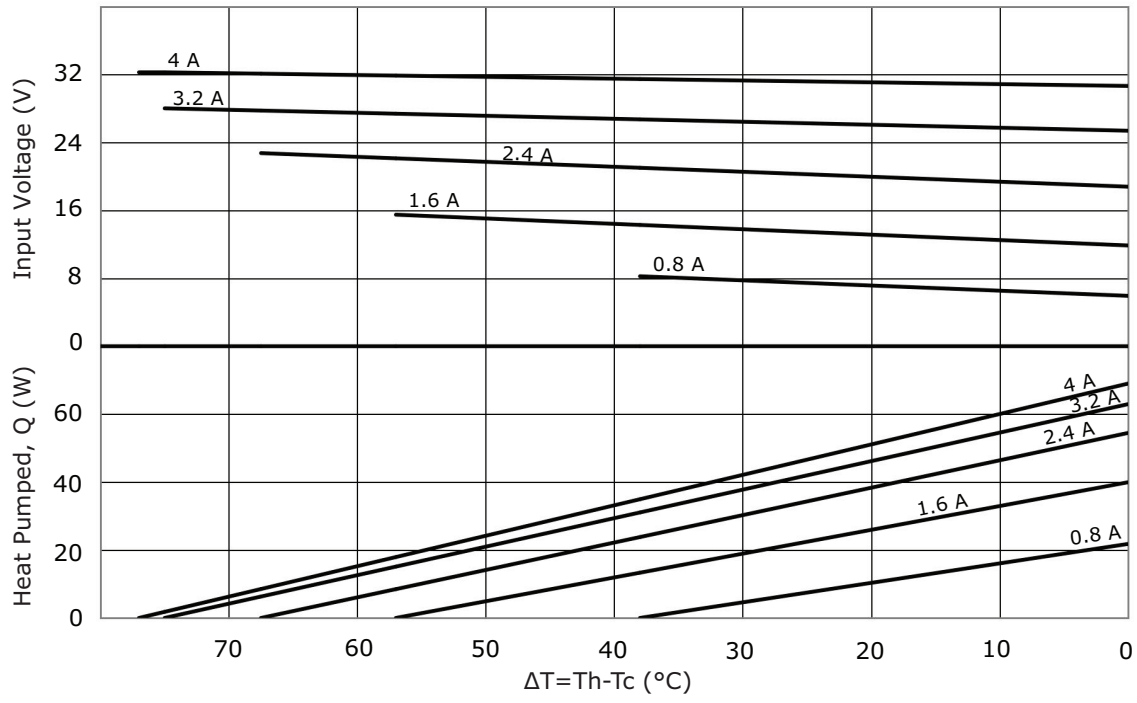

## CP40447 PERFORMANCE (Th=50°C)



## CP4055485 PERFORMANCE (Th=27°C)




## CP4055485 PERFORMANCE (Th=50°C)



## REVISION HISTORY

| rev. | description | date |
|---|---|---|
| 1.0 | initial release | 09/03/2009 |
| 1.01 | applied new template | 05/08/2012 |
| 1.02 | added new models | 09/08/2016 |
| 1.03 | changed models CP40347 & CP40447 to arcTEC™ structure | 12/01/2017 |
| 1.04 | changed thickness of CP40147, CP40247, CP40301547 models | 09/19/2018 |
| 1.05 | added models CP40439, CP404046, CP4055485, brand update | 10/18/2019 |
| 1.06 | added model CP402533 | 11/17/2020 |
| 1.07 | logo, datasheet style update | 08/05/2022 |
| 1.08 | CUI Devices rebranded to Same Sky | 09/12/2024 |

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

same sky

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