



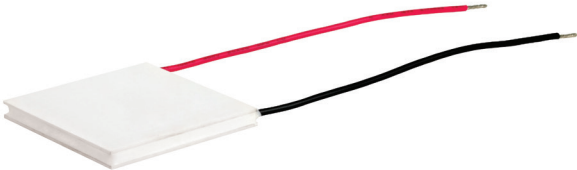
SERIES: CP85

|

DESCRIPTION: PELTIER MODULE

FEATURES

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



MODEL

|                      | input<br>voltage <sup>1</sup><br>max<br>[Vdc] | input<br>current <sup>2</sup><br>max<br>[A] | internal<br>resistance <sup>3</sup><br>typ<br>[Ω±10%] | output<br>Qmax <sup>4</sup> |                             | output<br>ΔTmax <sup>5</sup> |                              |
|----------------------|-----------------------------------------------|---------------------------------------------|-------------------------------------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|
|                      |                                               |                                             |                                                       | T <sub>h</sub> =27°C<br>[W] | T <sub>h</sub> =50°C<br>[W] | T <sub>h</sub> =27°C<br>[°C] | T <sub>h</sub> =50°C<br>[°C] |
| CP85204035           | 7.6                                           | 8.5                                         | 0.75                                                  | 37.4                        | 41.8                        | 68                           | 75                           |
| CP85301535           | 4.2                                           | 8.5                                         | 0.41                                                  | 20.0                        | 22.3                        | 68                           | 75                           |
| CP85435 <sup>6</sup> | 24.1                                          | 8.5                                         | 2.28                                                  | 118                         | 130                         | 68                           | 75                           |
| CP85138              | 2.1                                           | 8.5                                         | 0.20                                                  | 10.0                        | 11.1                        | 68                           | 75                           |
| CP85238              | 3.8                                           | 8.5                                         | 0.40                                                  | 18.0                        | 20.1                        | 68                           | 75                           |
| CP85338              | 8.6                                           | 8.5                                         | 0.90                                                  | 42.0                        | 46.9                        | 68                           | 75                           |
| CP85438              | 15.4                                          | 8.5                                         | 1.50                                                  | 75.0                        | 83.9                        | 68                           | 75                           |

Notes:

1. Maximum voltage at ΔT max and T<sub>h</sub>=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<sub>max</sub>, V<sub>max</sub>, and ΔT=0°C

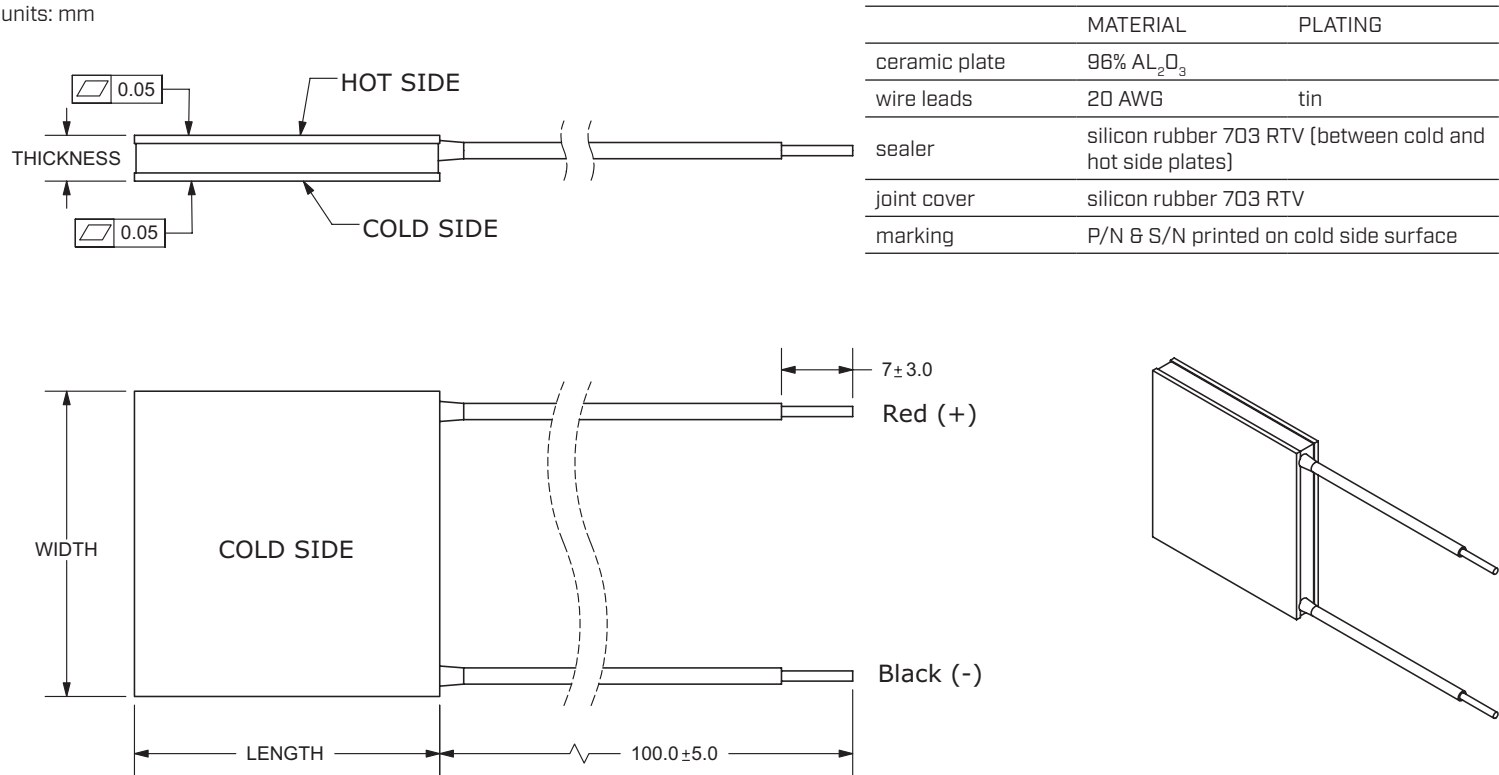
5. Maximum temperature difference occurs at I<sub>max</sub>, V<sub>max</sub>, and Q=0W (ΔT max measured in a vacuum at 1.3 Pa)

6. Designed with arcTEC™ structure

SPECIFICATIONS

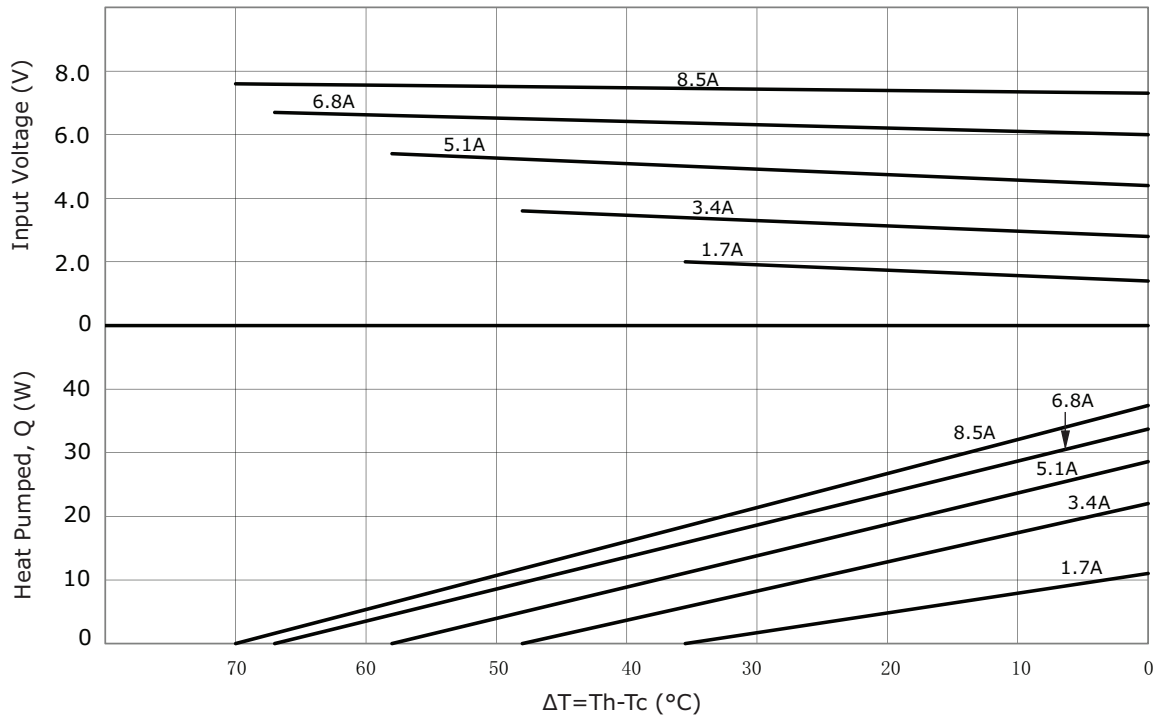
| parameter                  | conditions/description                  | min | typ | max | units |
|----------------------------|-----------------------------------------|-----|-----|-----|-------|
| solder melting temperature | connection between thermoelectric pairs | 235 |     |     | °C    |
| assembly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

MECHANICAL DRAWING

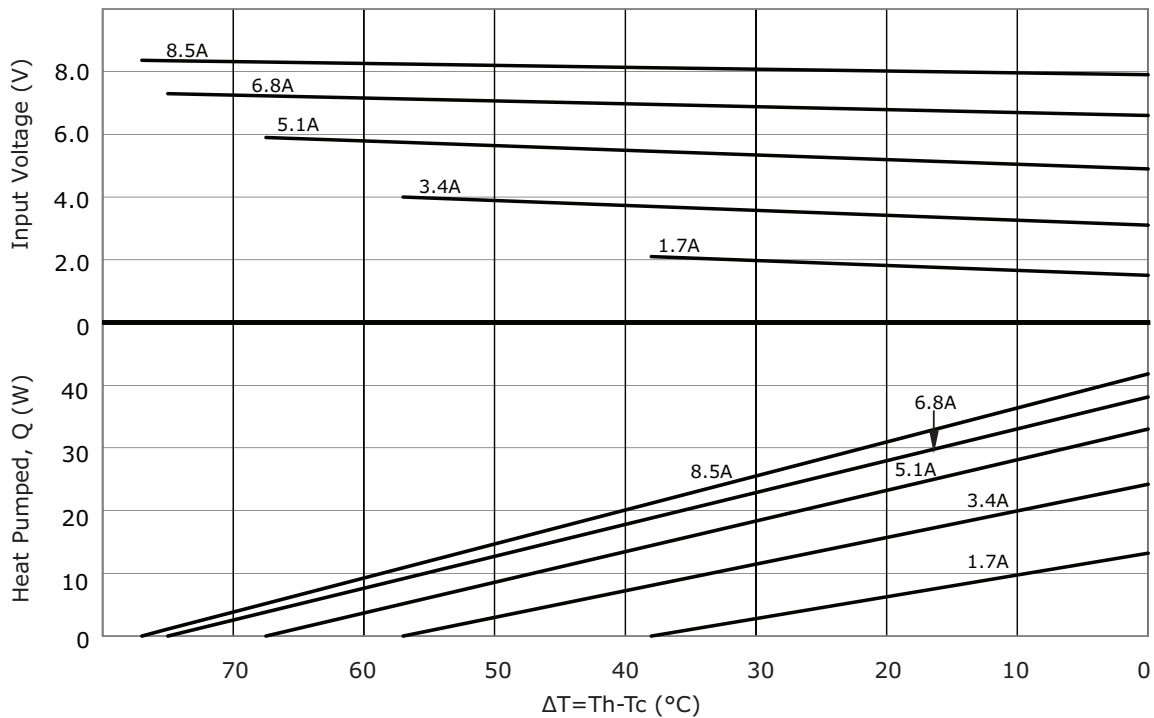


| MODEL NO.  | LENGTH [mm] | WIDTH [mm] | THICKNESS [mm] |
|------------|-------------|------------|----------------|
| CP85204035 | 20 ±0.3     | 40 ±0.3    | 3.5 ±0.1       |
| CP85301535 | 30 ±0.3     | 15 ±0.3    | 3.5 ±0.1       |
| CP85435    | 40 ±0.3     | 40 ±0.3    | 3.5 ±0.1       |
| CP85138    | 15 ±0.3     | 15 ±0.3    | 3.74 ±0.1      |
| CP85238    | 20 ±0.3     | 20 ±0.3    | 3.74 ±0.1      |
| CP85338    | 30 ±0.3     | 30 ±0.3    | 3.74 ±0.1      |
| CP85438    | 40 ±0.3     | 40 ±0.3    | 3.74 ±0.1      |

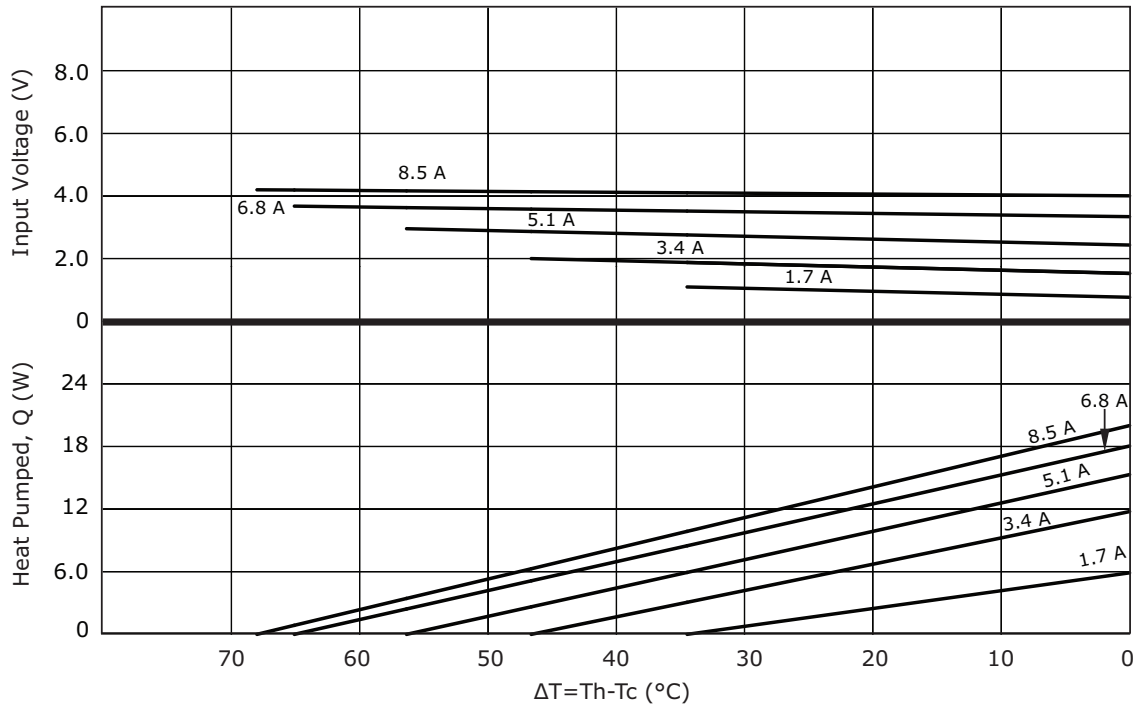
## CP85204035 PERFORMANCE (Th=27°C)



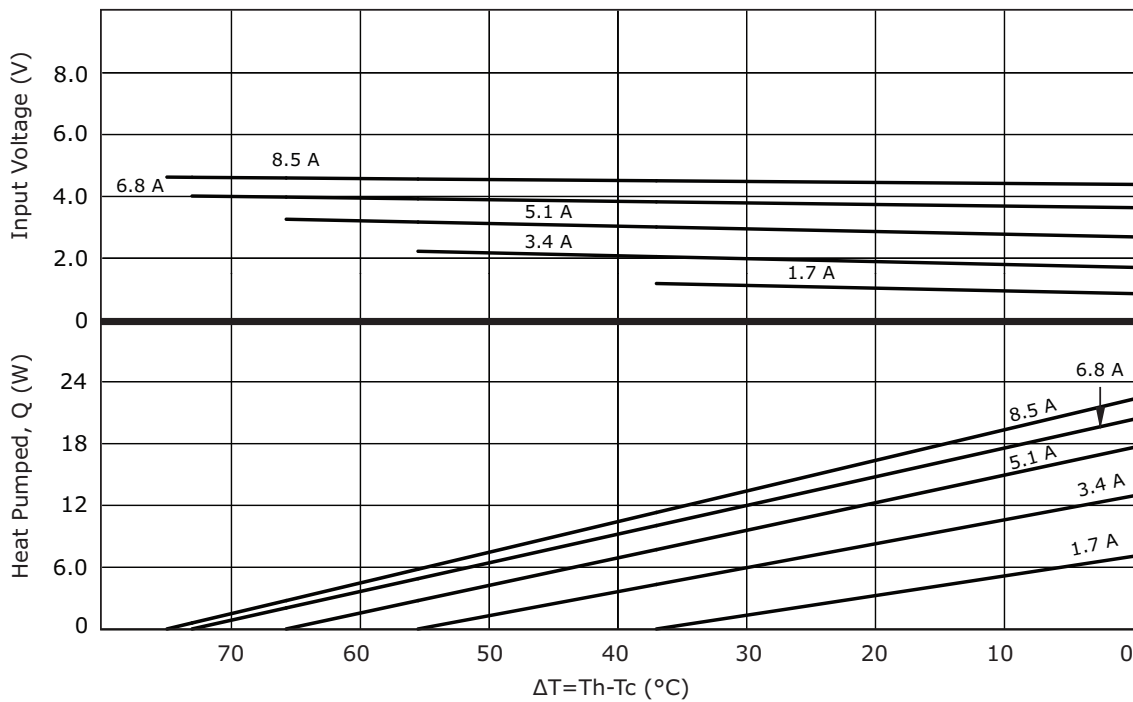
## CP85204035 PERFORMANCE (Th=50°C)



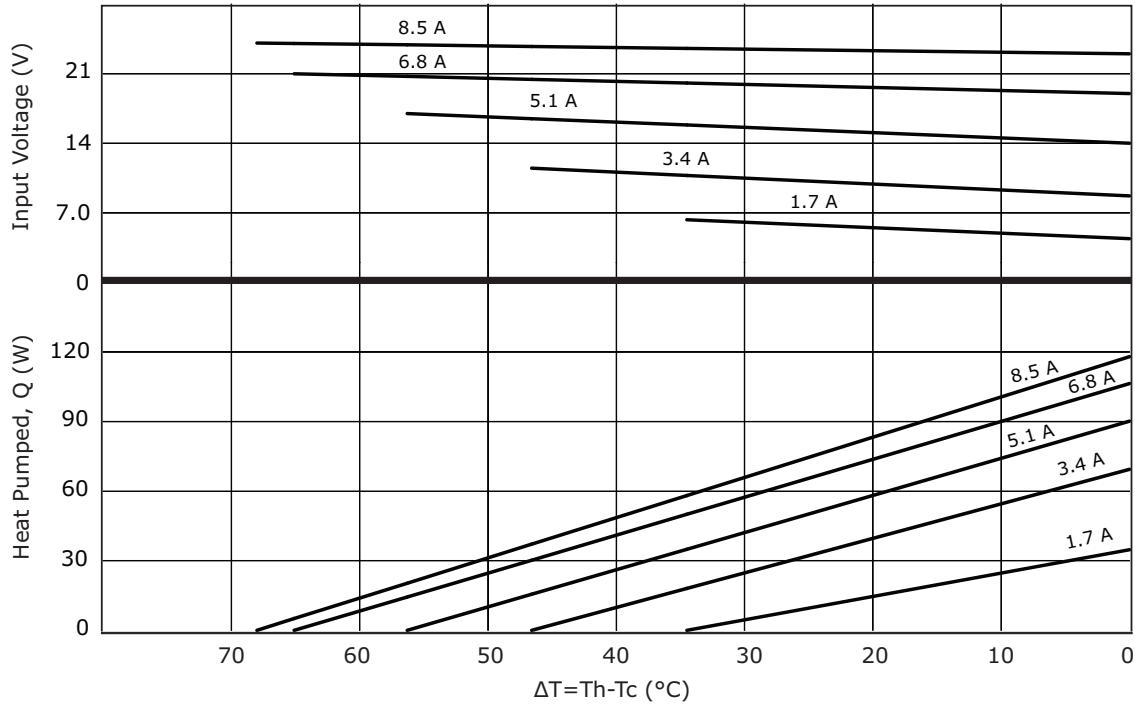
## CP85301535 PERFORMANCE (Th=27°C)



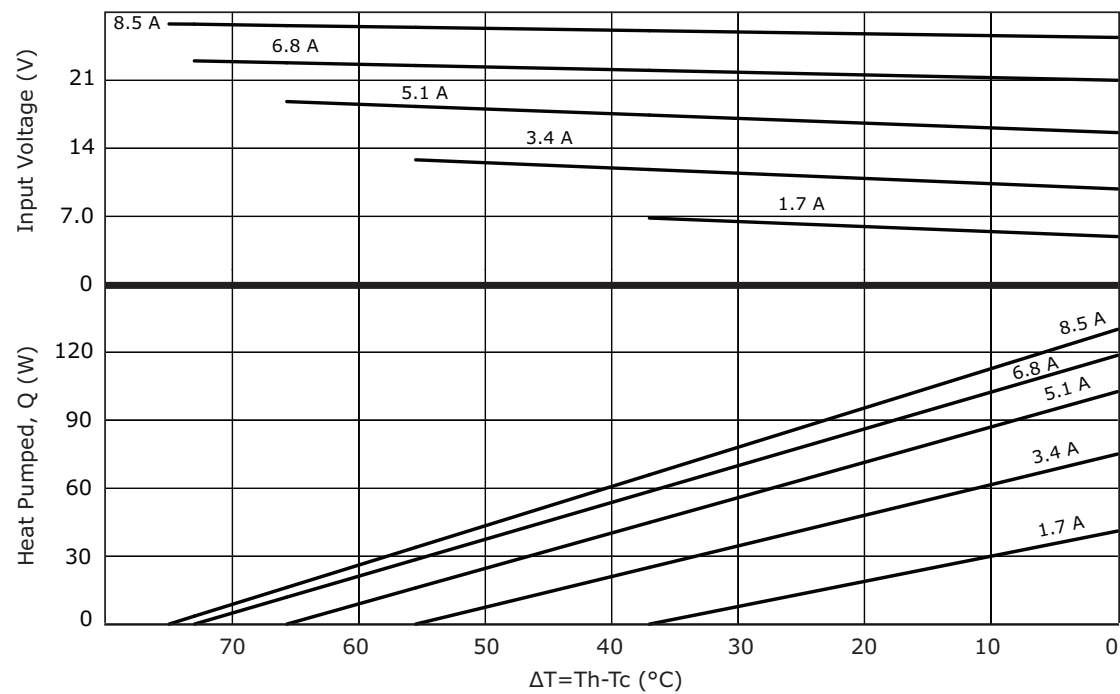
## CP85301535 PERFORMANCE (Th=50°C)



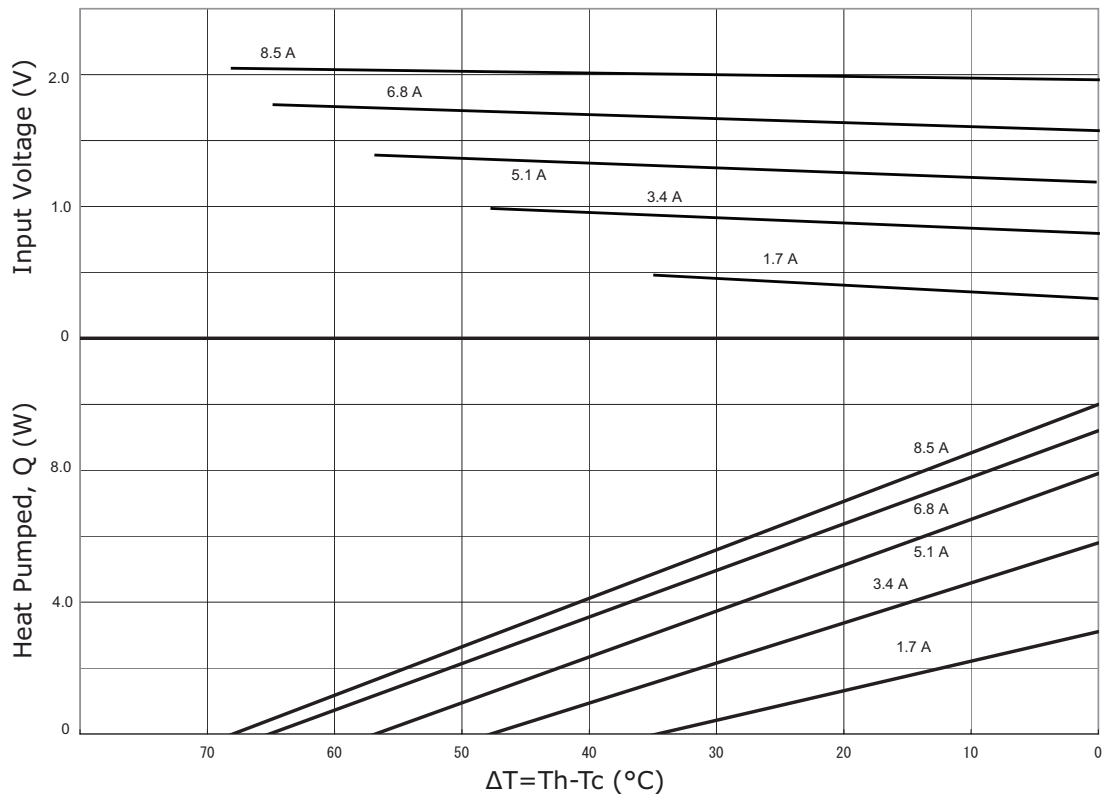
## CP85435 PERFORMANCE (Th=27°C)



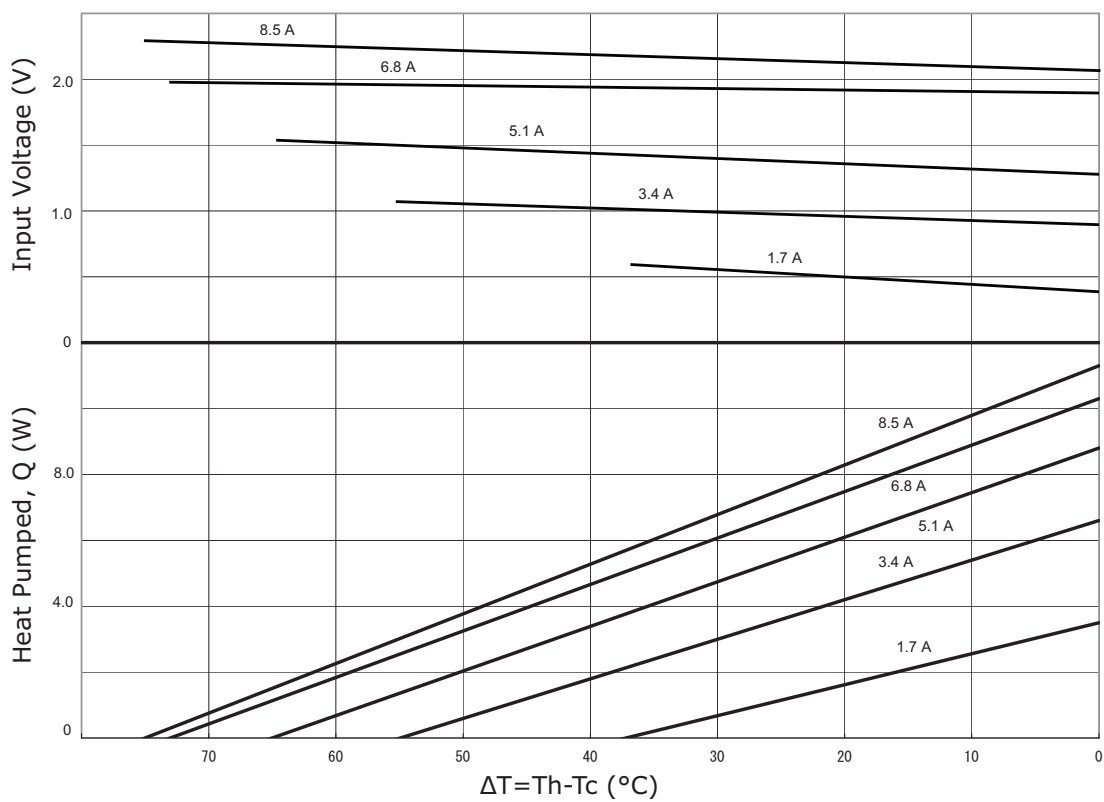
## CP85435 PERFORMANCE (Th=50°C)



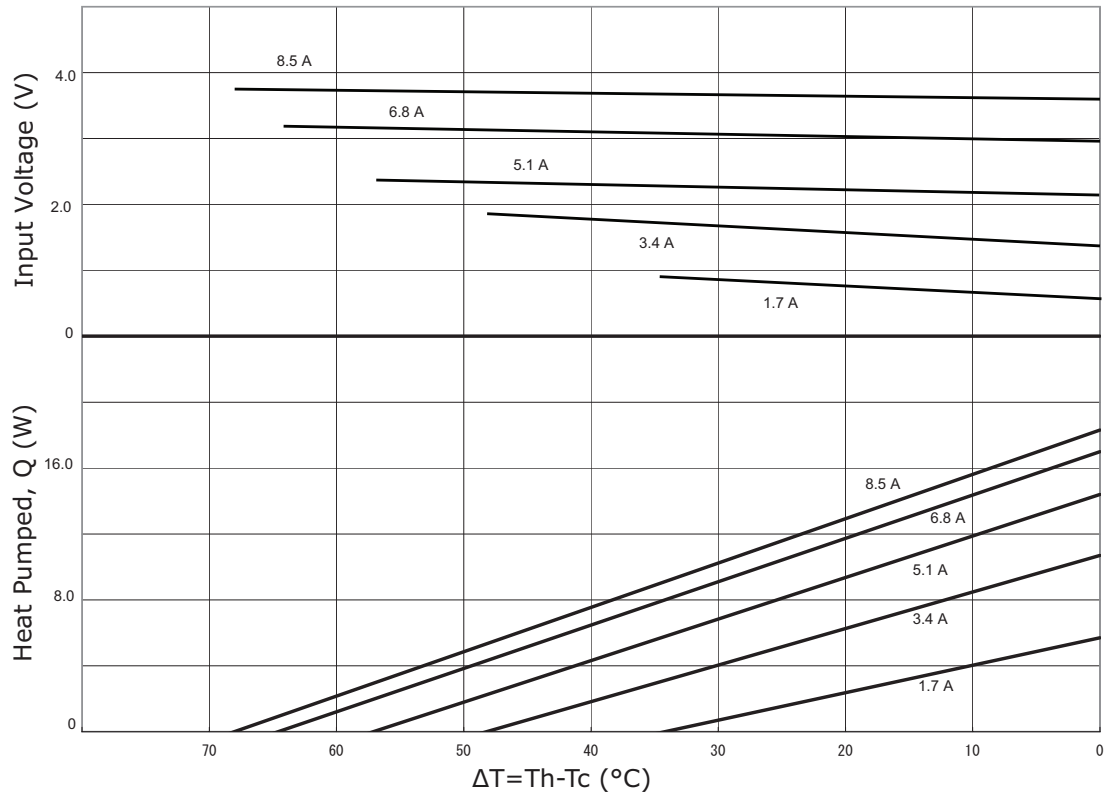
## CP85138 PERFORMANCE (Th=27°C)



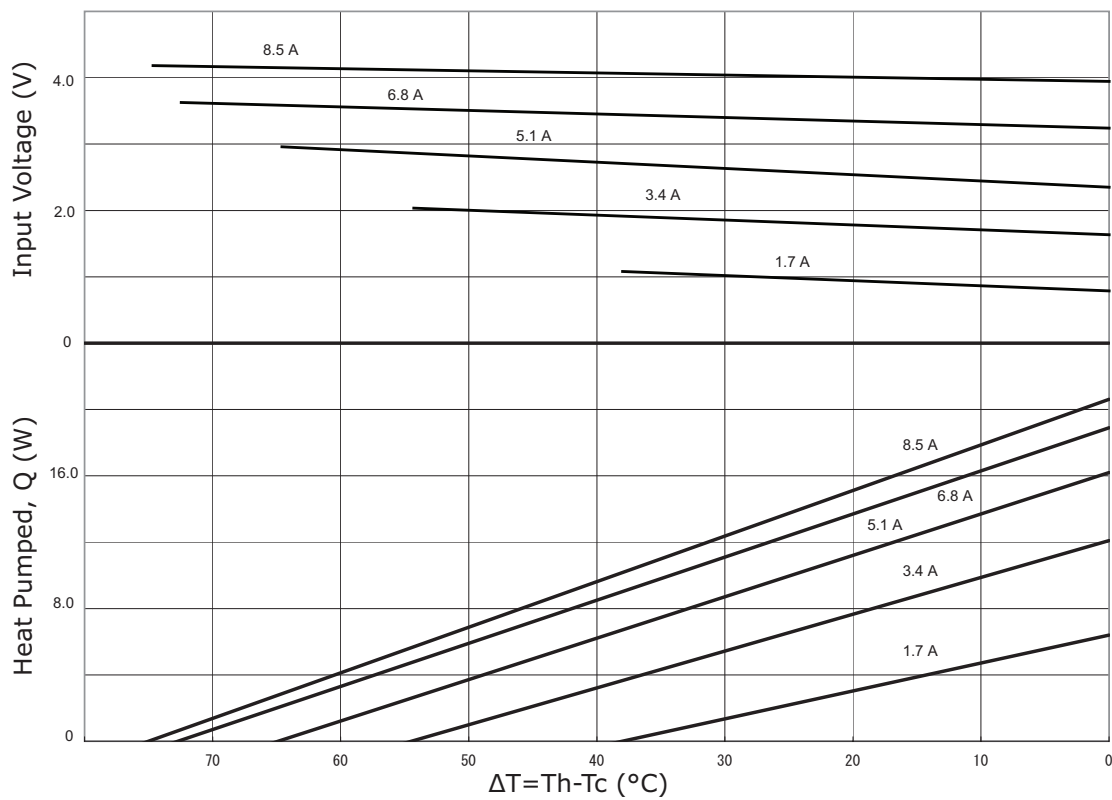
## CP85138 PERFORMANCE (Th=50°C)



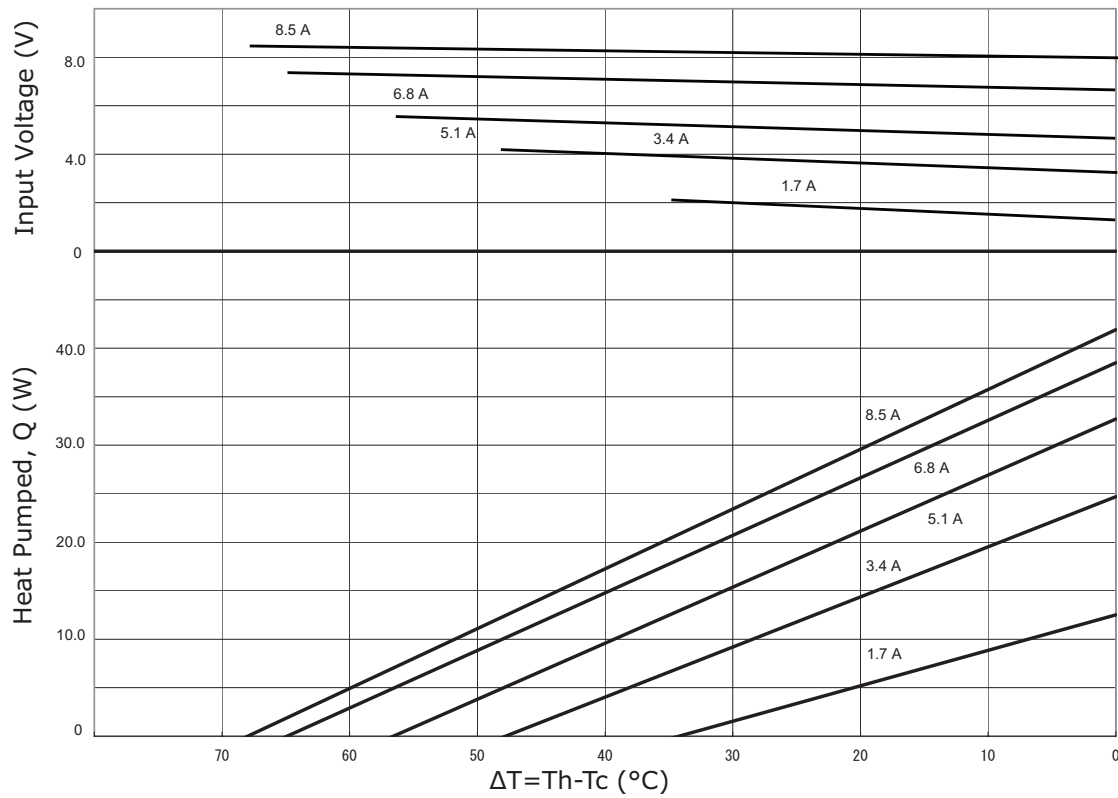
## CP85238 PERFORMANCE (Th=27°C)



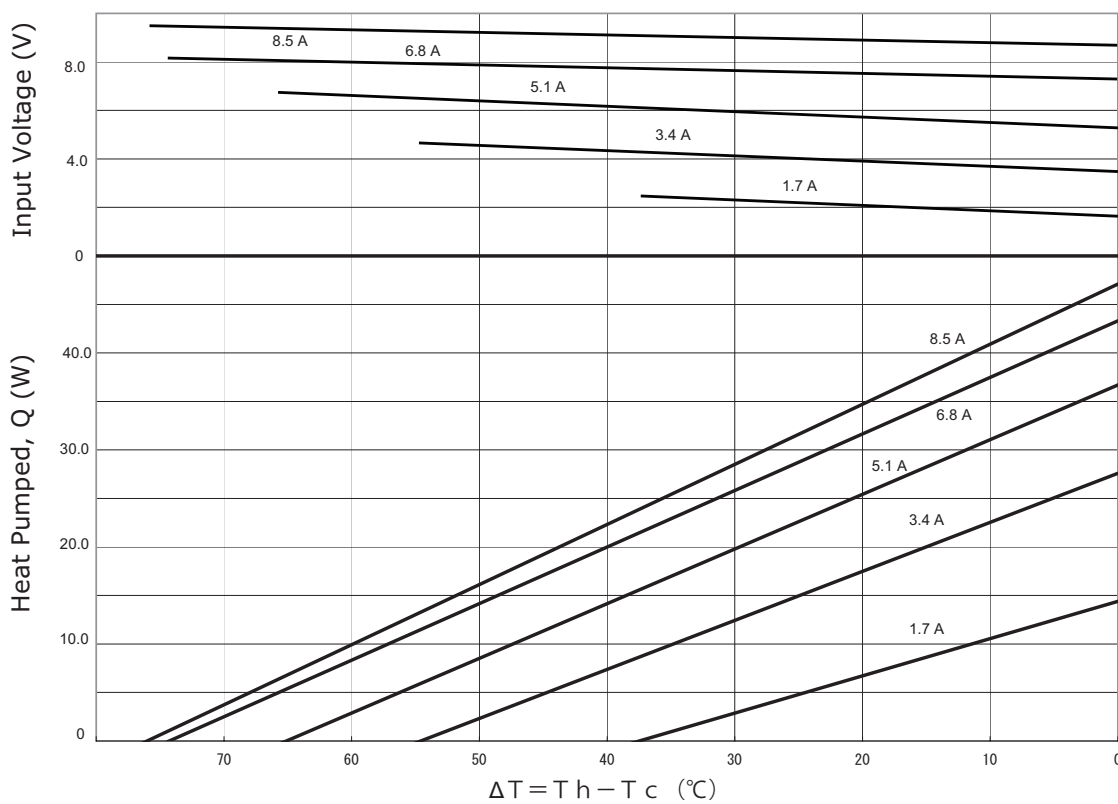
## CP85238 PERFORMANCE (Th=50°C)



## CP85338 PERFORMANCE (Th=27°C)

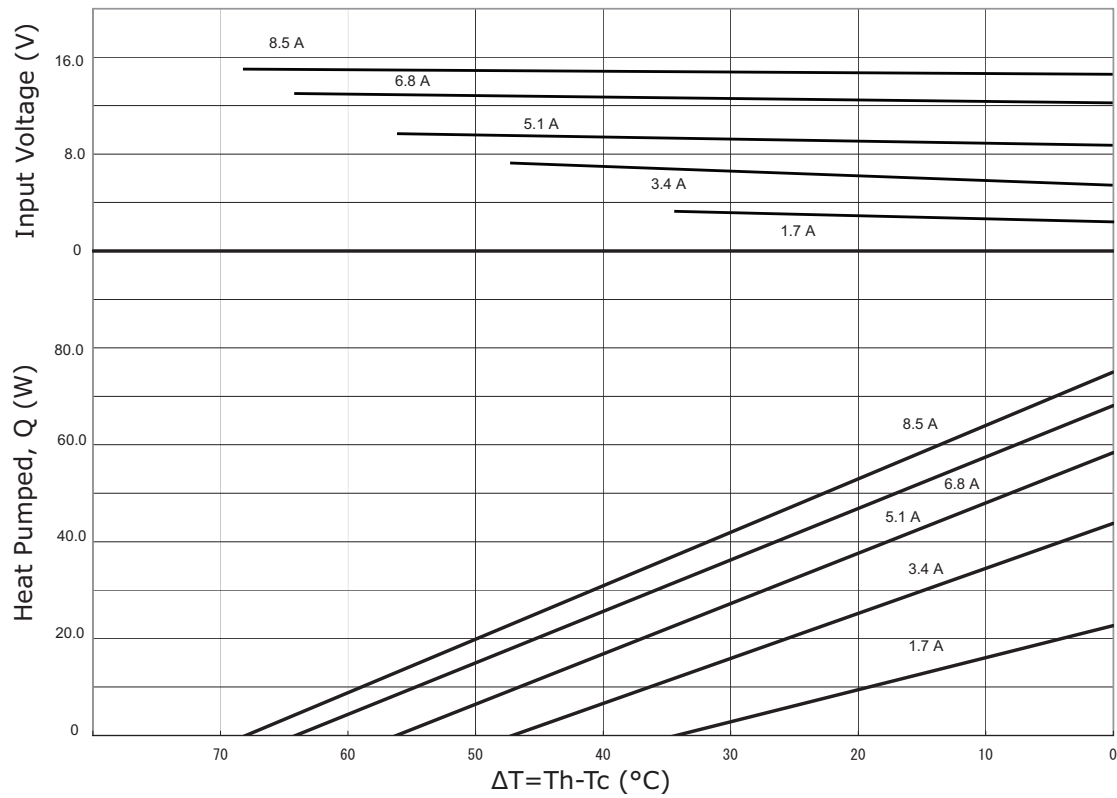


## CP85338 PERFORMANCE (Th=50°C)

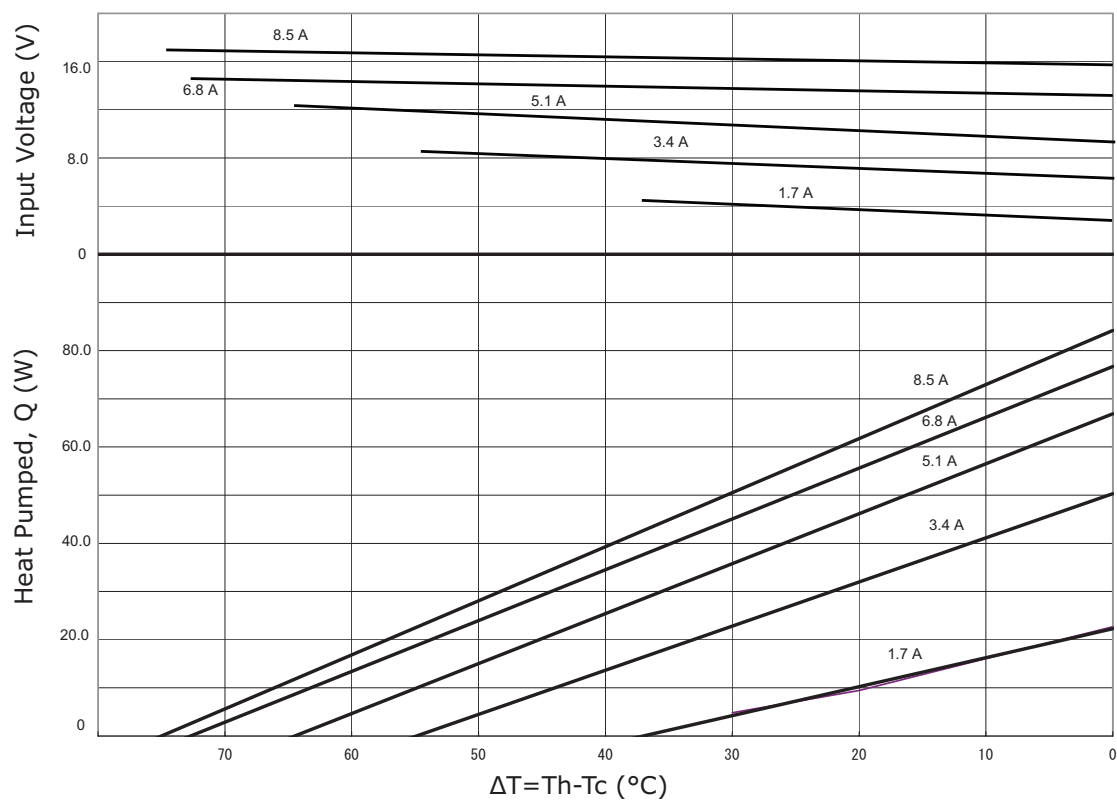




## CP85438 PERFORMANCE (Th=27°C)



## CP85438 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 to higher temperature solder used in model CP85204035                       | 11/29/2017 |
| 1.04 | changed thickness of CP85138, CP85238, CP85338, CP85438, CP85301535, CP85435 models | 09/19/2018 |
| 1.05 | changed thickness of model CP85204035                                               | 12/03/2018 |
| 1.06 | brand update                                                                        | 10/28/2019 |
| 1.07 | updated datasheet                                                                   | 11/30/2020 |
| 1.08 | logo, datasheet style update                                                        | 08/05/2022 |
| 1.09 | 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 offers a one (1) year limited warranty. Complete warranty information is listed on our website.

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