



SERIES:

CP100

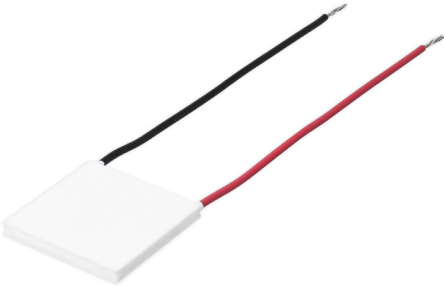
|

DESCRIPTION:

PELTIER MODULE

FEATURES

- arcTEC™ structure on select models
- enhanced reliability for high thermal cycling
- superior thermal performance
- silicon sealed
- wide  $\Delta T$  max
- precise temperature control
- solid state construction



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>[ $\Omega \pm 10\%$ ] | output<br>Qmax <sup>4</sup> |                             | output<br>$\Delta T$ max <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] |
| CP10205033               | 9.6                                           | 10                                          | 0.71                                                                | 56.2                        | 62                          | 68                                    | 75                           |
| CP103033 <sup>6</sup>    | 11.8                                          | 10                                          | 0.88                                                                | 69                          | 75                          | 70                                    | 77                           |
| CP10304033 <sup>6</sup>  | 15                                            | 10                                          | 1.13                                                                | 89                          | 97                          | 70                                    | 77                           |
| CP10415273 <sup>6</sup>  | 4.9                                           | 10                                          | 0.37                                                                | 28                          | 30                          | 70                                    | 77                           |
| CP105559415 <sup>6</sup> | 24.6                                          | 10                                          | 1.82                                                                | 140                         | 154                         | 70                                    | 77                           |

Notes:

1. Maximum voltage at  $\Delta T$  max and T<sub>h</sub>=27°C

2. Maximum current to achieve  $\Delta T$  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  $\Delta T=0^{\circ}\text{C}$

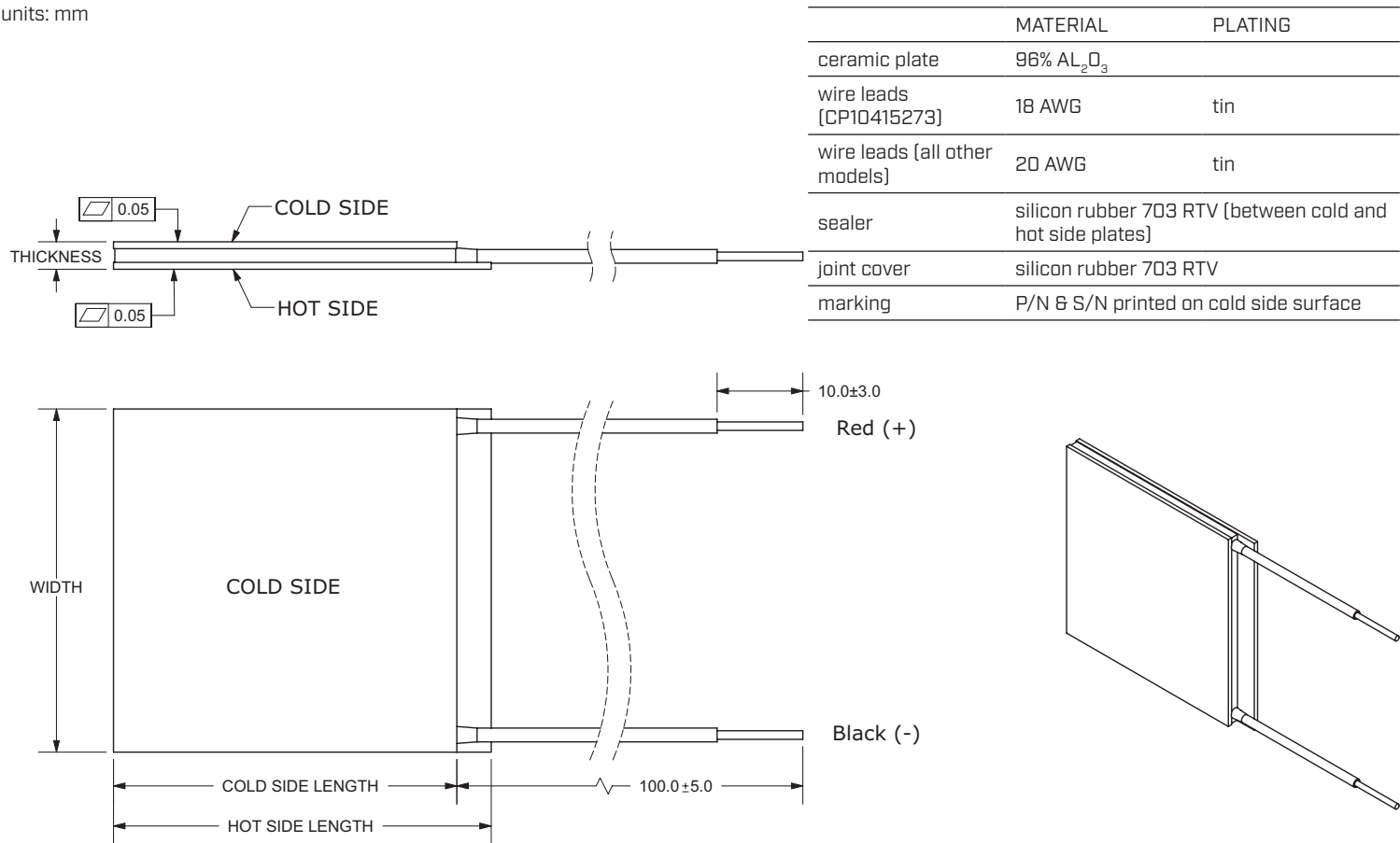
5. Maximum temperature difference occurs at I<sub>max</sub>, V<sub>max</sub>, and Q=0W ( $\Delta T$  max measured in a vacuum at 1.3 Pa)

6. Designed with arcTEC™ structure.

SPECIFICATIONS

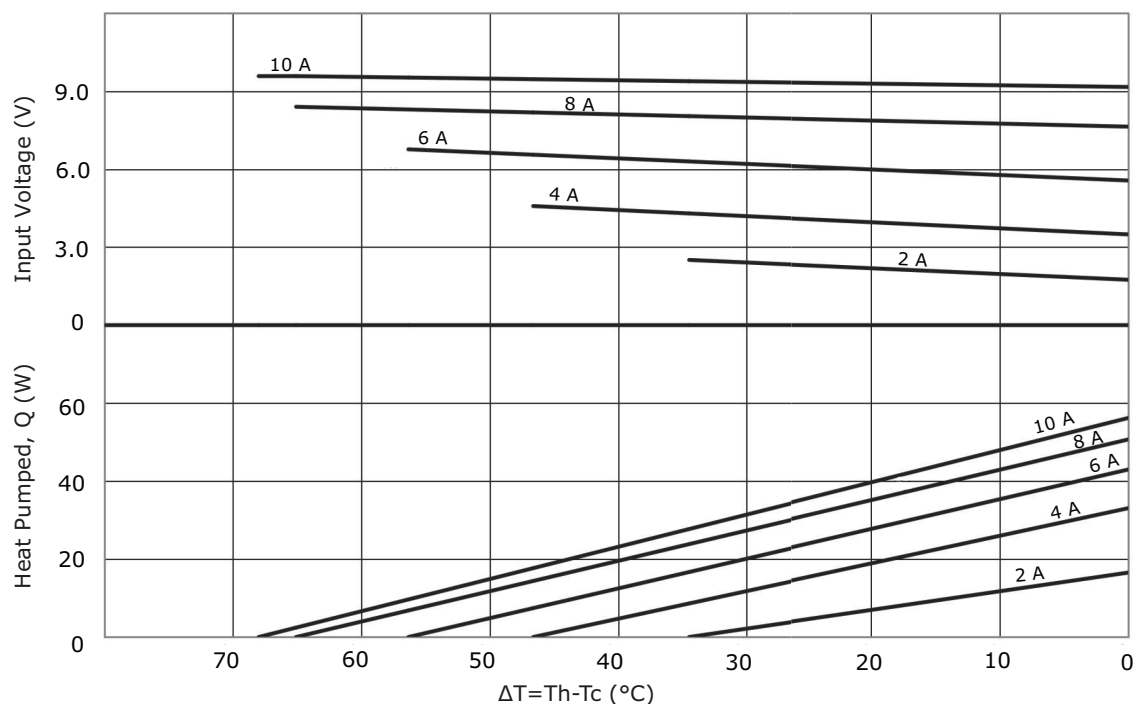
| parameter                  | conditions/description                  | min | typ | max | units |
|----------------------------|-----------------------------------------|-----|-----|-----|-------|
| solder melting temperature | connection between thermoelectric pairs | 235 |     |     | °C    |
| assembly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

MECHANICAL DRAWING

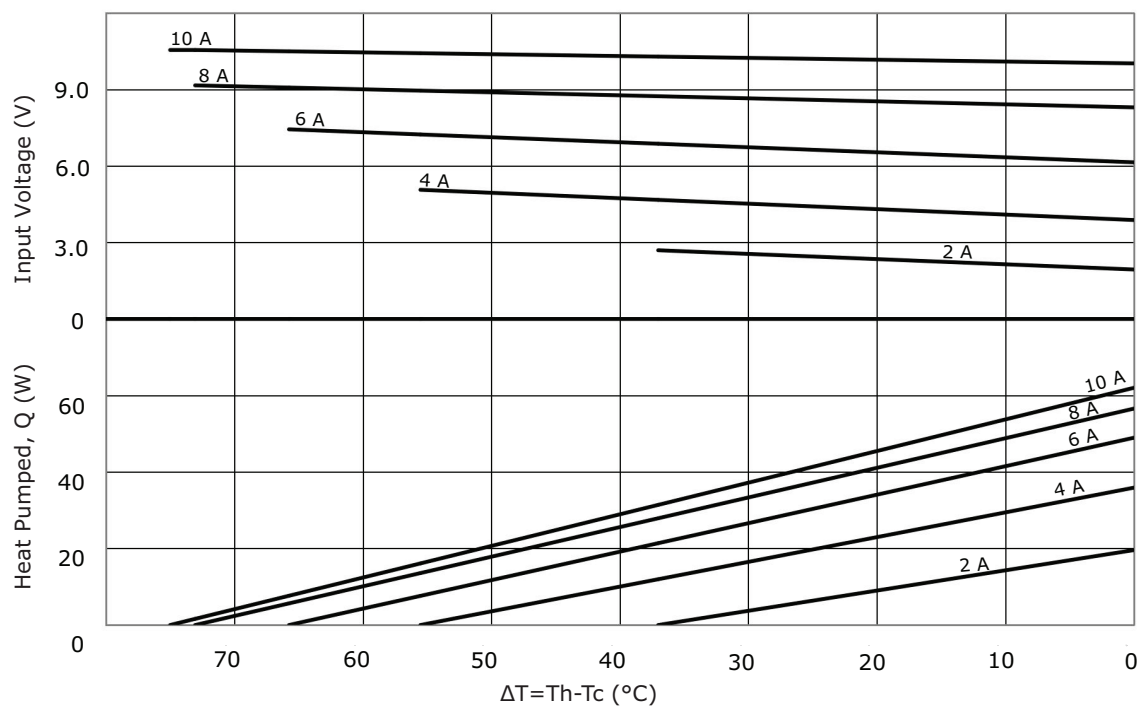


| MODEL NO.   | HOT SIDE LENGTH [mm] | COLD SIDE LENGTH [mm] | WIDTH [mm] | THICKNESS [mm] |
|-------------|----------------------|-----------------------|------------|----------------|
| CP10205033  | 20 ±0.3              | 20 ±0.3               | 50 ±0.3    | 3.3 ±0.1       |
| CP103033    | 30 ±0.3              | 30 ±0.3               | 30 ±0.3    | 3.3 ±0.1       |
| CP10304033  | 30 ±0.3              | 30 ±0.3               | 40 ±0.3    | 3.3 ±0.1       |
| CP10415273  | 57 ±0.3              | 52 ±0.3               | 41 ±0.3    | 7.3 ±0.1       |
| CP105559415 | 59 ±0.3              | 55 ±0.3               | 55 ±0.3    | 4.15 ±0.1      |

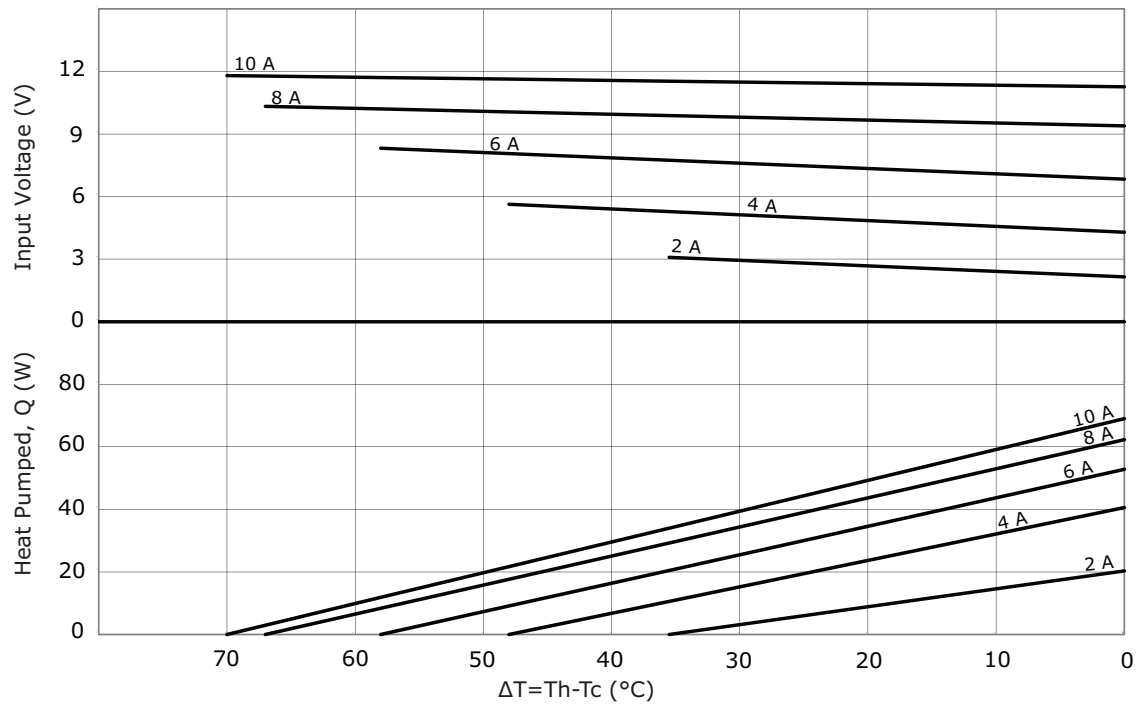
## CP10205033 PERFORMANCE (Th=27°C)



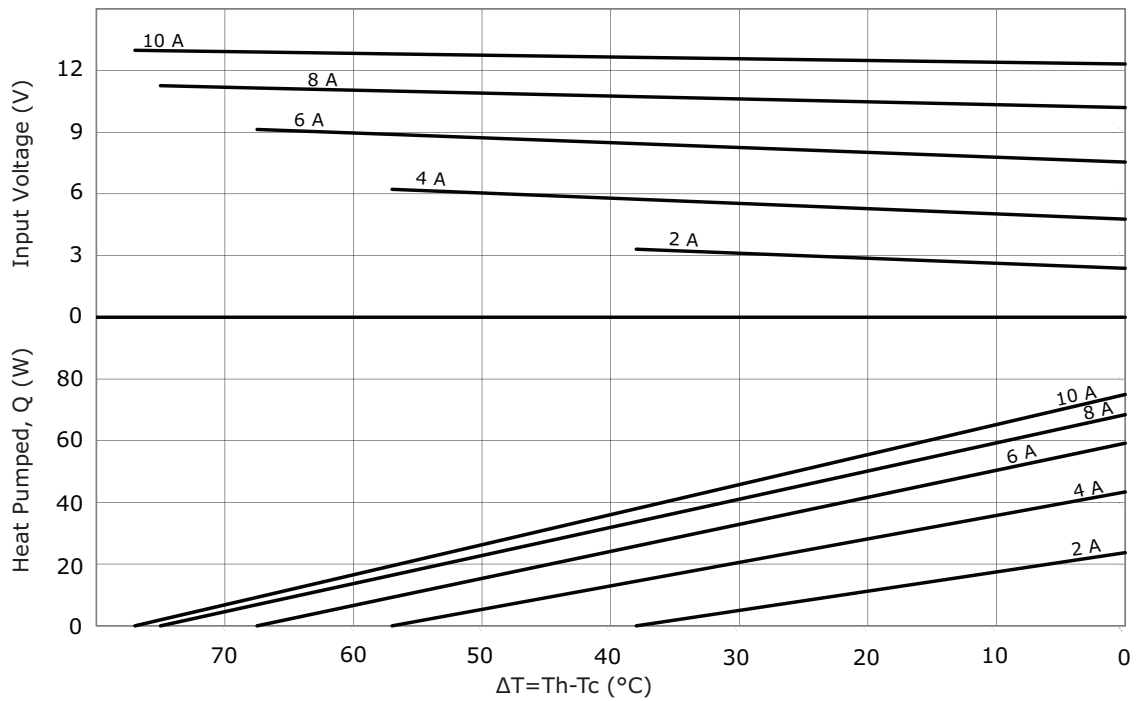
## CP10205033 PERFORMANCE (Th=50°C)



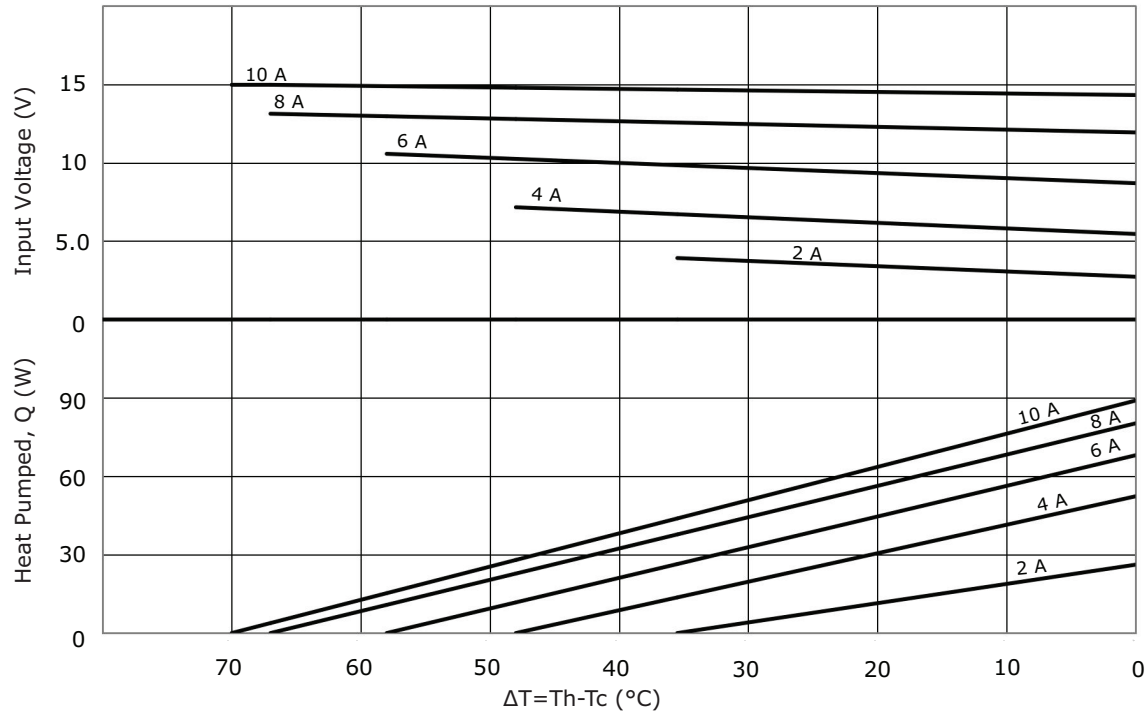
## CP103033 PERFORMANCE (Th=27°C)



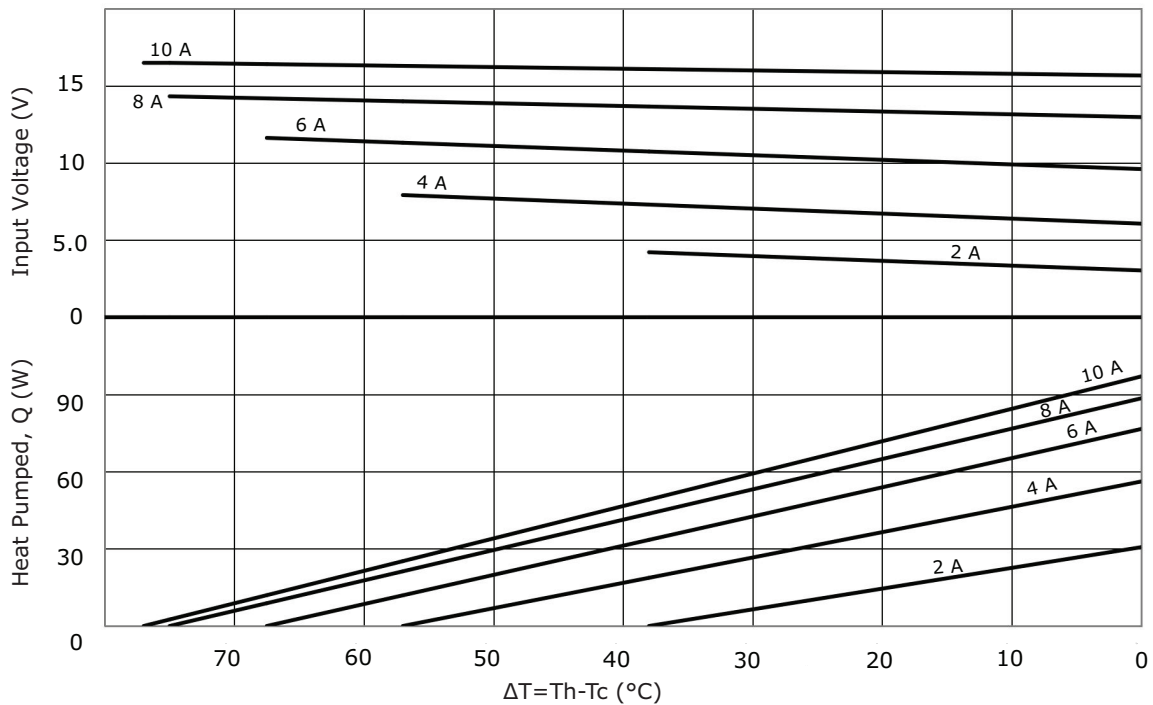
## CP103033 PERFORMANCE (Th=50°C)



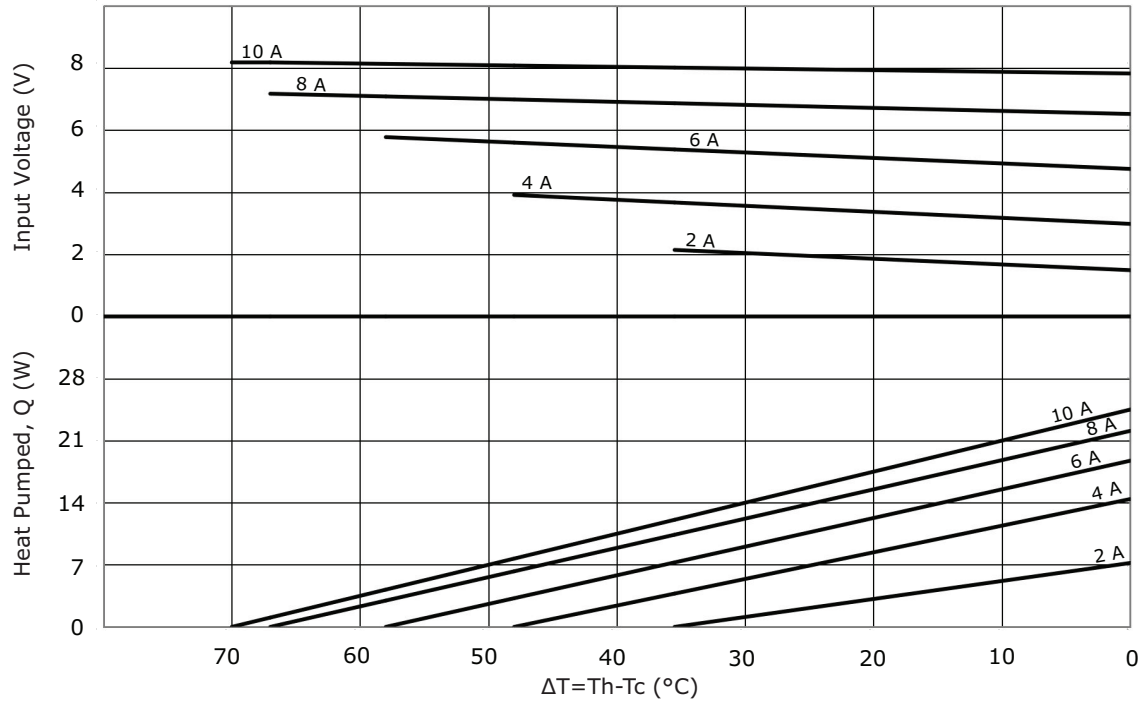
## CP10304033 PERFORMANCE (Th=27°C)



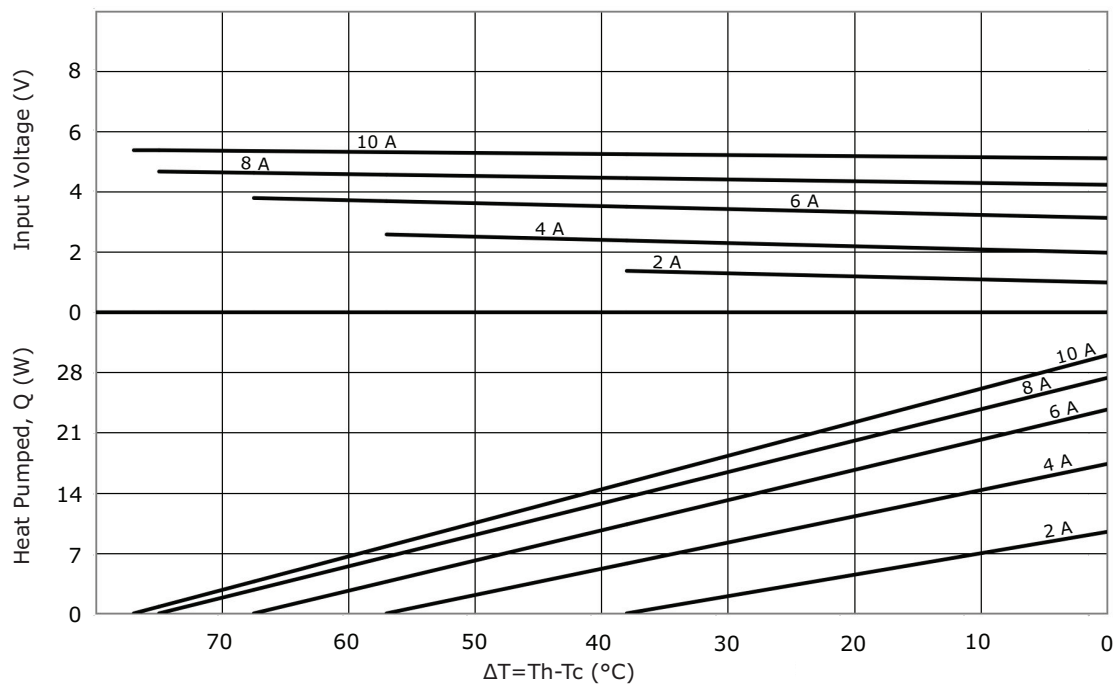
## CP10304033 PERFORMANCE (Th=50°C)



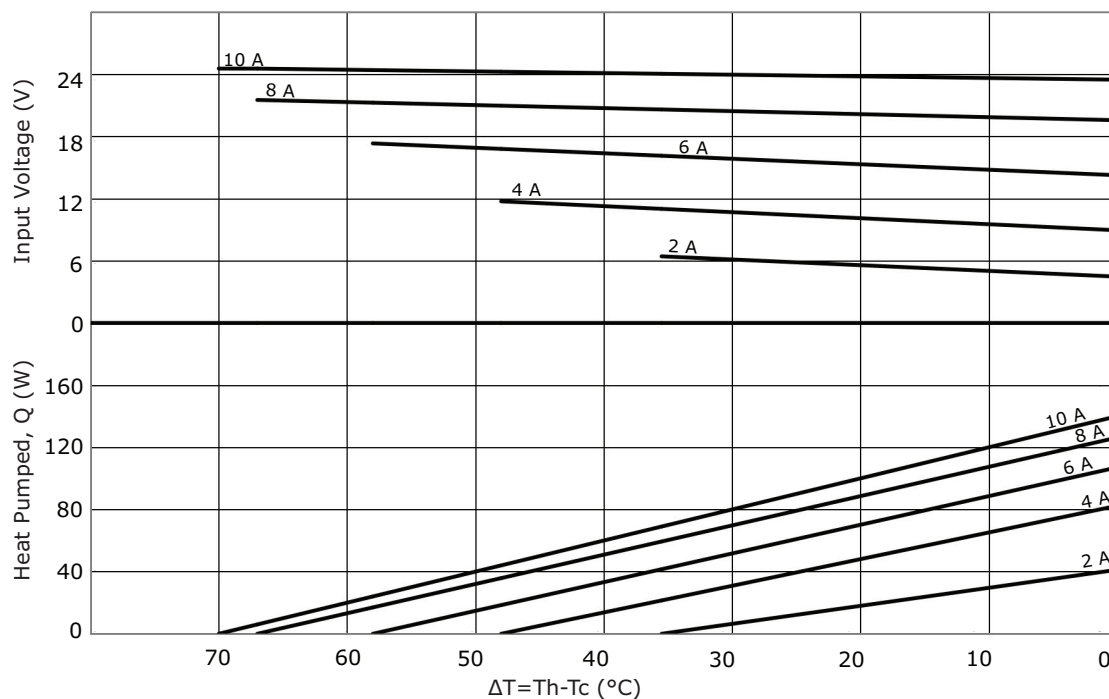
## CP10415273 PERFORMANCE (Th=27°C)



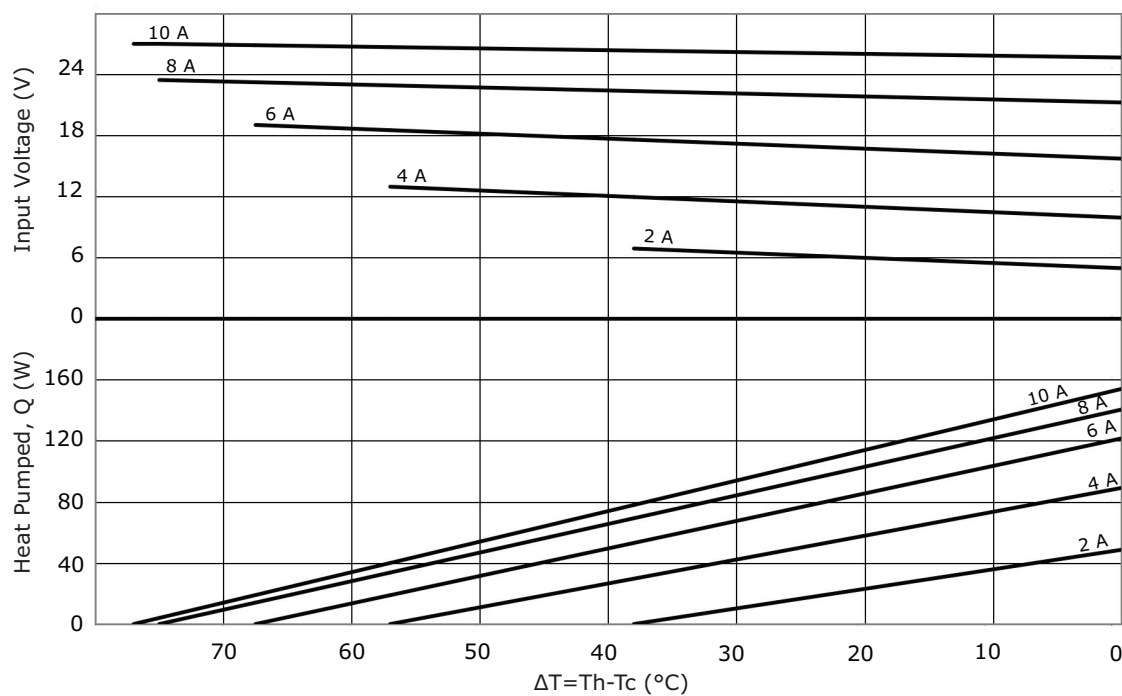
## CP10415273 PERFORMANCE (Th=50°C)



## CP105559415 PERFORMANCE (Th=27°C)



## CP105559415 PERFORMANCE (Th=50°C)



REVISION HISTORY

| rev. | description                          | date       |
|------|--------------------------------------|------------|
| 1.0  | initial release                      | 11/05/2019 |
| 1.01 | added models CP10205033 & CP10304033 | 11/09/2020 |
| 1.02 | logo, datasheet style update         | 08/05/2022 |
| 1.03 | 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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