



SERIES:

CP39H

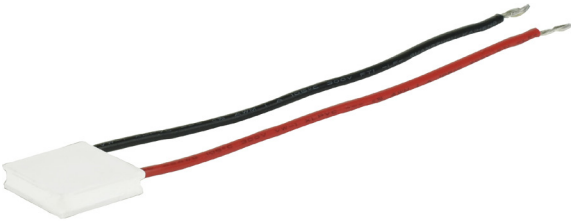
|

DESCRIPTION:

PELTIER MODULE

FEATURES

- arcTEC™ structure on select models
- enhanced reliability for high thermal cycling
- superior thermal performance
- silicon sealed
- wide  $\Delta T_{max}$
- low profile
- 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] |
| CP39136H                 | 3.8                                           | 3.9                                         | 0.85                                                                | 8.6                         | 9.5                         | 70                                      | 77                           |
| CP39236H                 | 8.8                                           | 3.9                                         | 1.95                                                                | 18.7                        | 20.9                        | 70                                      | 77                           |
| CP39234030H              | 14.9                                          | 3.9                                         | 3.38                                                                | 31.0                        | 35.9                        | 68                                      | 75                           |
| CP39301536H              | 7.6                                           | 3.9                                         | 1.73                                                                | 16.5                        | 18.1                        | 70                                      | 77                           |
| CP393365H <sup>6</sup>   | 15.7                                          | 3.9                                         | 3.50                                                                | 35.2                        | 39.0                        | 70                                      | 77                           |
| CP394044365 <sup>6</sup> | 32.5                                          | 3.9                                         | 6.95±5%                                                             | 71.8                        | 80.0                        | 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)

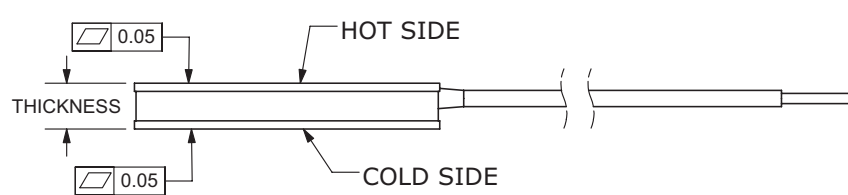
6. Designed with arcTEC™ structure.

SPECIFICATIONS

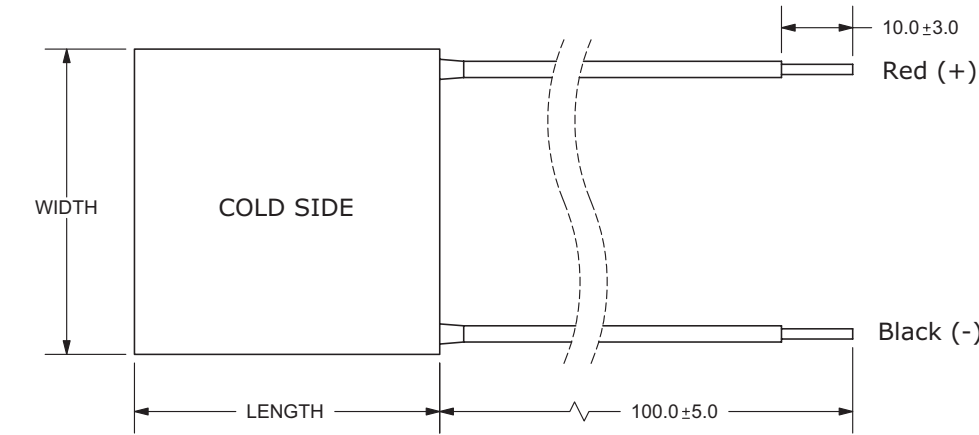
| parameter                  | conditions/description                  | min | typ | max | units |
|----------------------------|-----------------------------------------|-----|-----|-----|-------|
| solder melting temperature | connection between thermoelectric pairs | 235 |     |     | °C    |
| assembly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

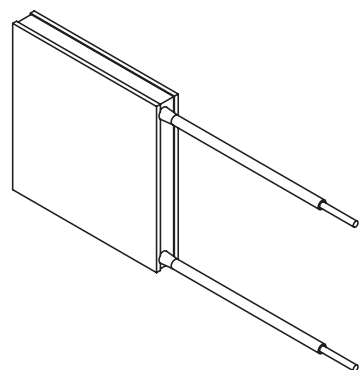
MECHANICAL DRAWING

units: mm



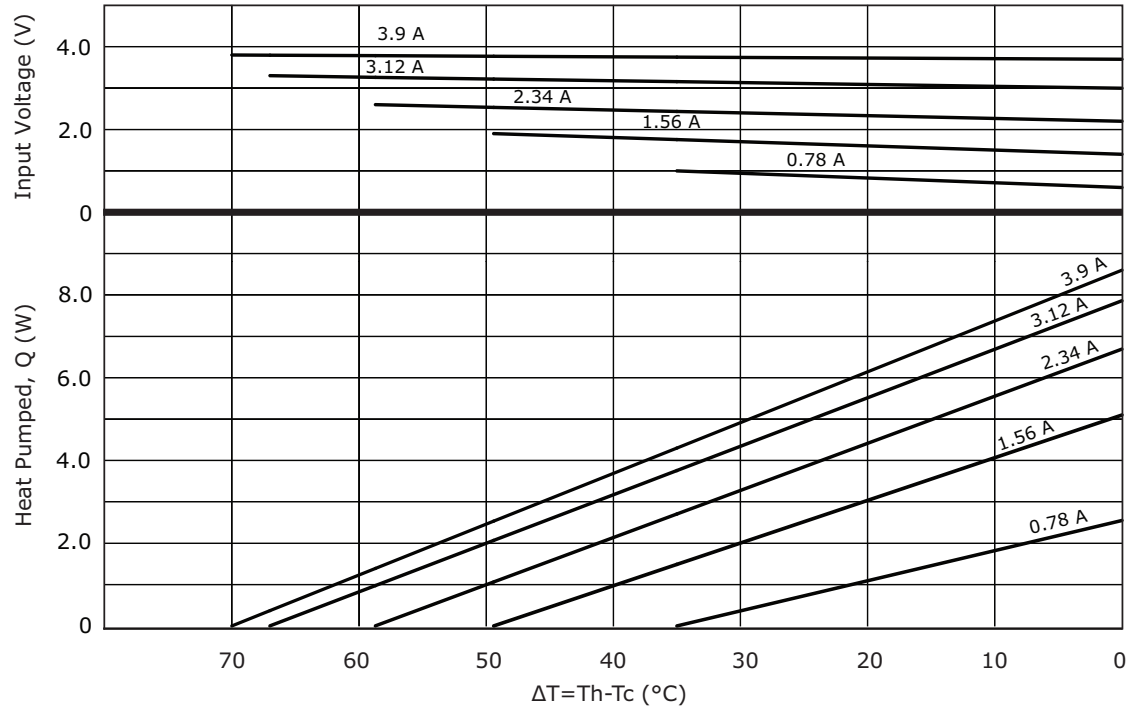
|               | MATERIAL                                                  | PLATING |
|---------------|-----------------------------------------------------------|---------|
| ceramic plate | 96% AL <sub>2</sub> O <sub>3</sub>                        |         |
| wire leads    | 22 AWG                                                    | 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                    |         |



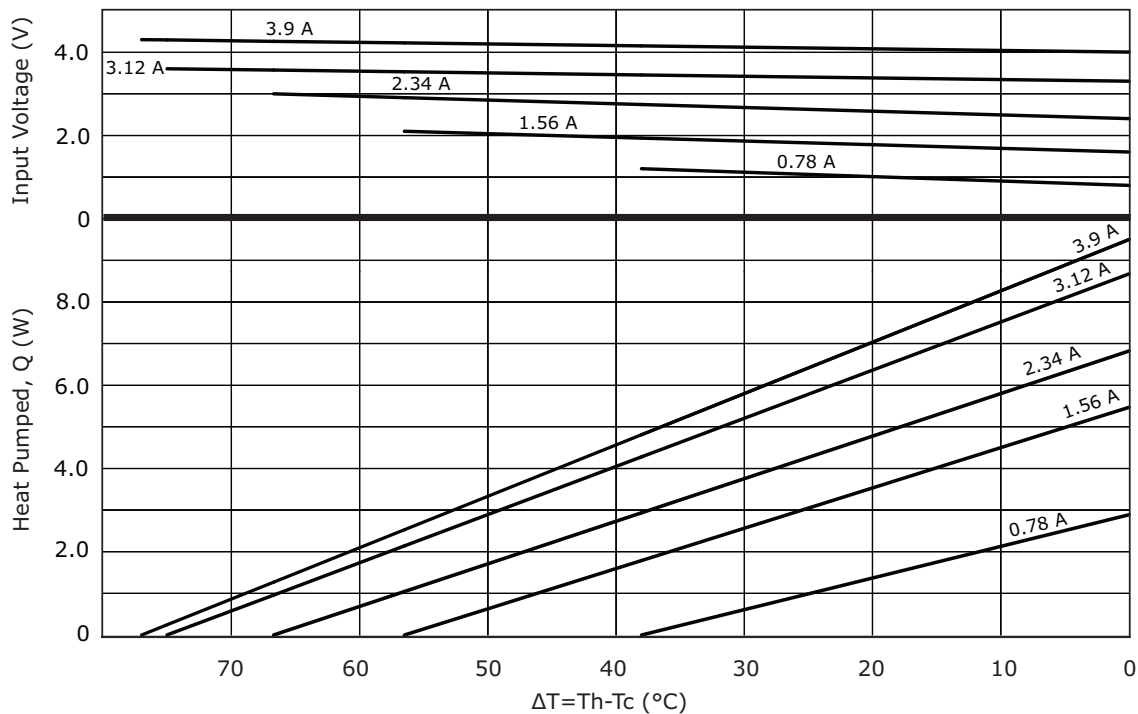


| MODEL NO.   | LENGTH (mm) | WIDTH (mm) | THICKNESS (mm) |
|-------------|-------------|------------|----------------|
| CP39136H    | 15 ±0.3     | 15 ±0.3    | 3.6 ±0.025     |
| CP39236H    | 20 ±0.3     | 20 ±0.3    | 3.6 ±0.025     |
| CP39234030H | 23 ±0.3     | 40 ±0.3    | 3.0 ±0.05      |
| CP39301536H | 30 ±0.3     | 15 ±0.3    | 3.6 ±0.025     |
| CP393365H   | 30 ±0.3     | 30 ±0.3    | 3.65 ±0.025    |
| CP394044365 | 44 ±0.3     | 40.5 ±0.3  | 3.65 ±0.1      |

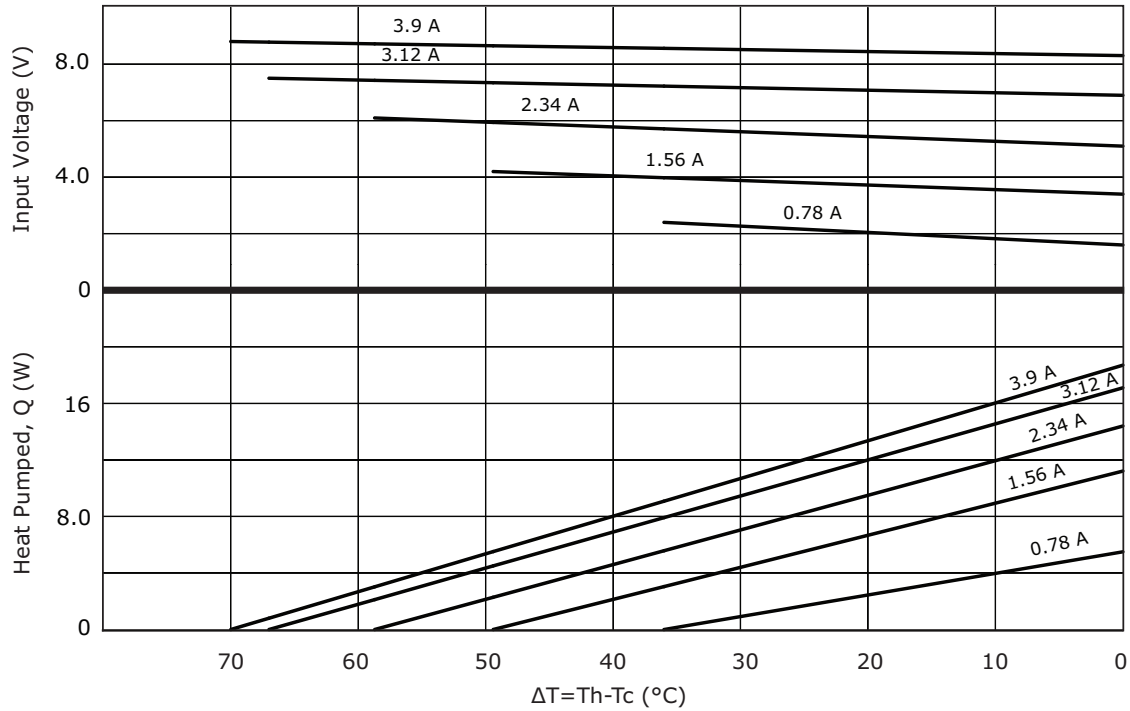
## CP39136H PERFORMANCE (Th=27°C)



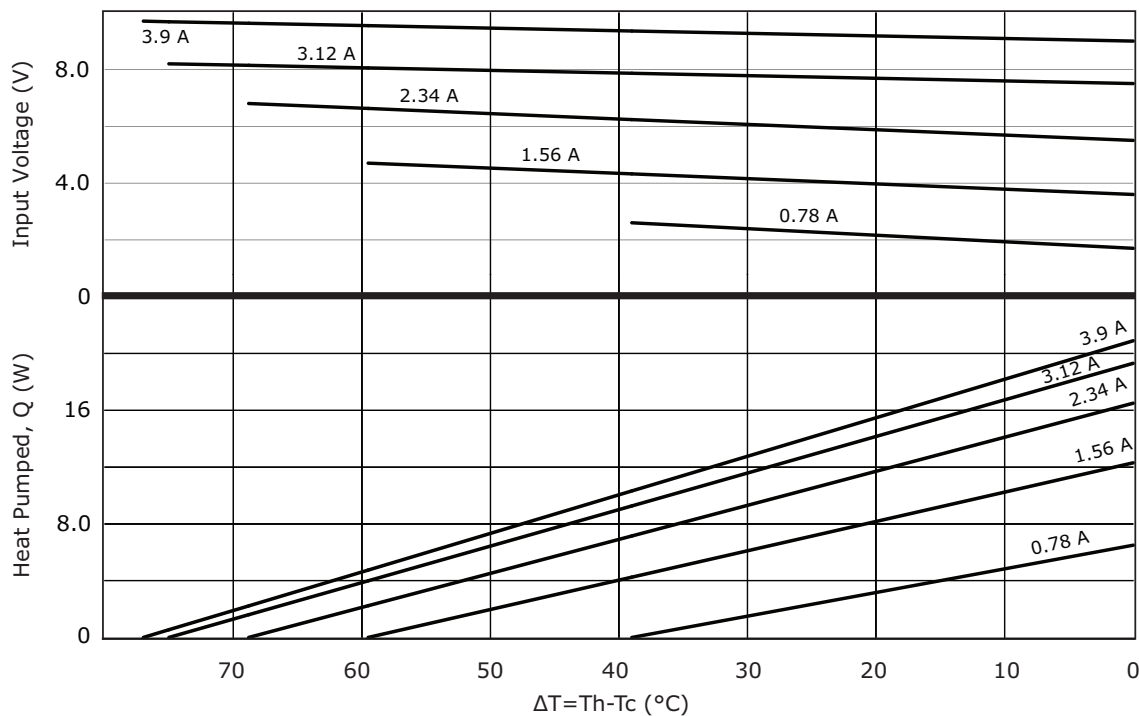
## CP39136H PERFORMANCE (Th=50°C)



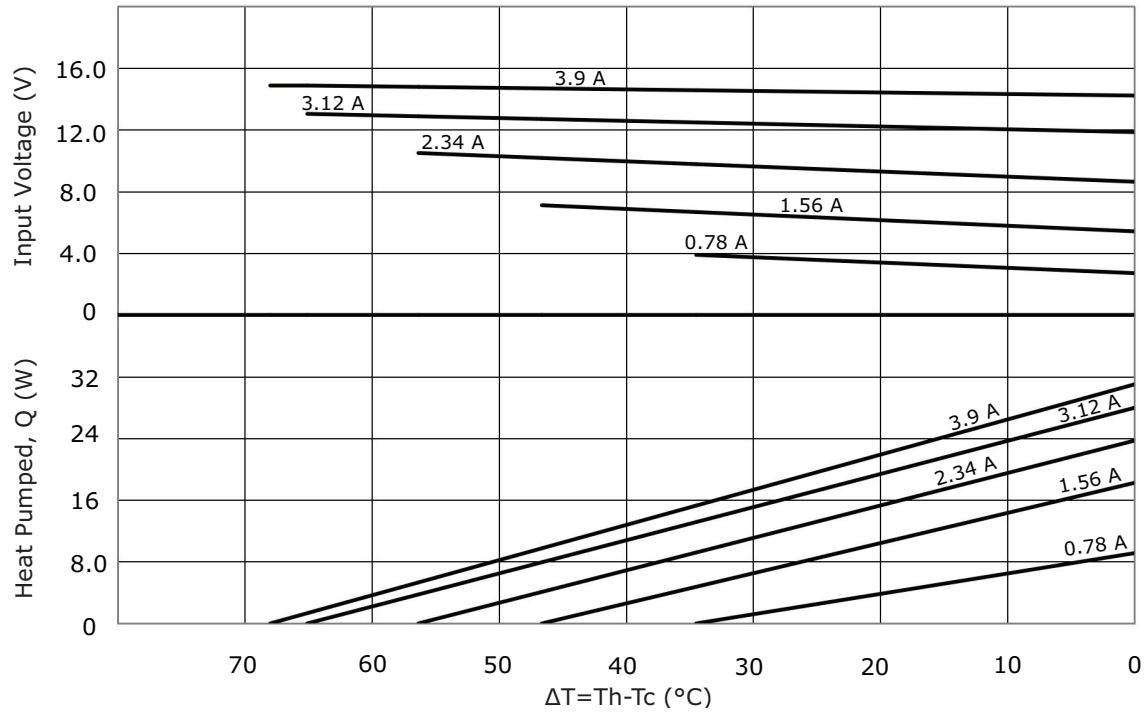
## CP39236H PERFORMANCE (Th=27°C)



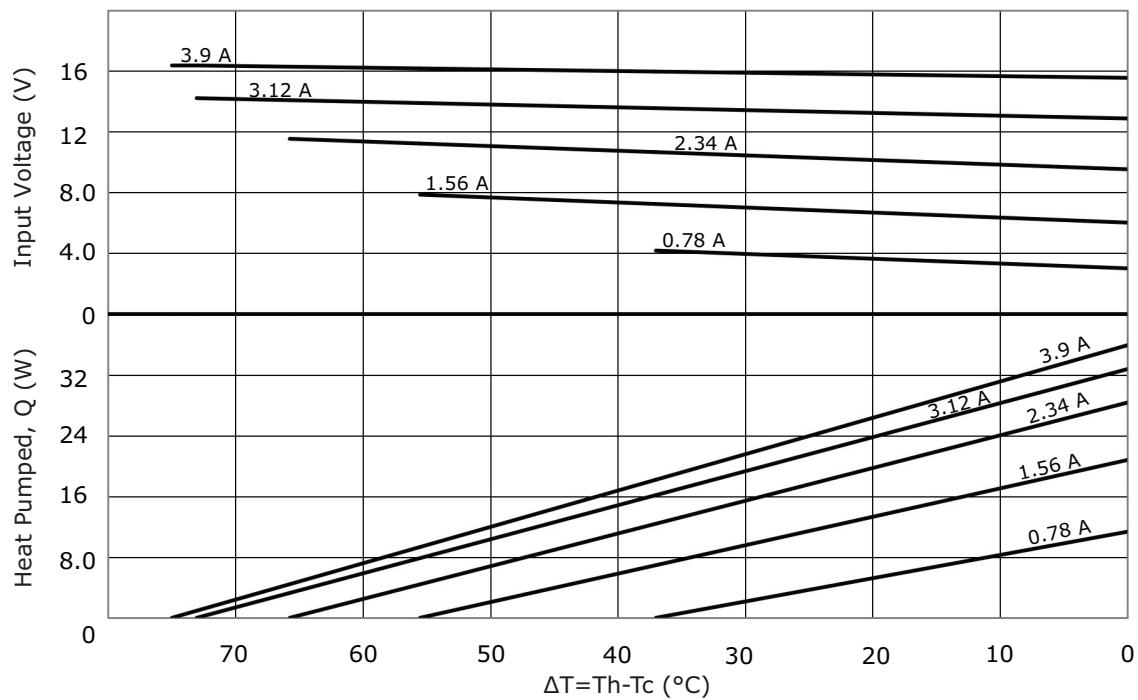
## CP39236H PERFORMANCE (Th=50°C)



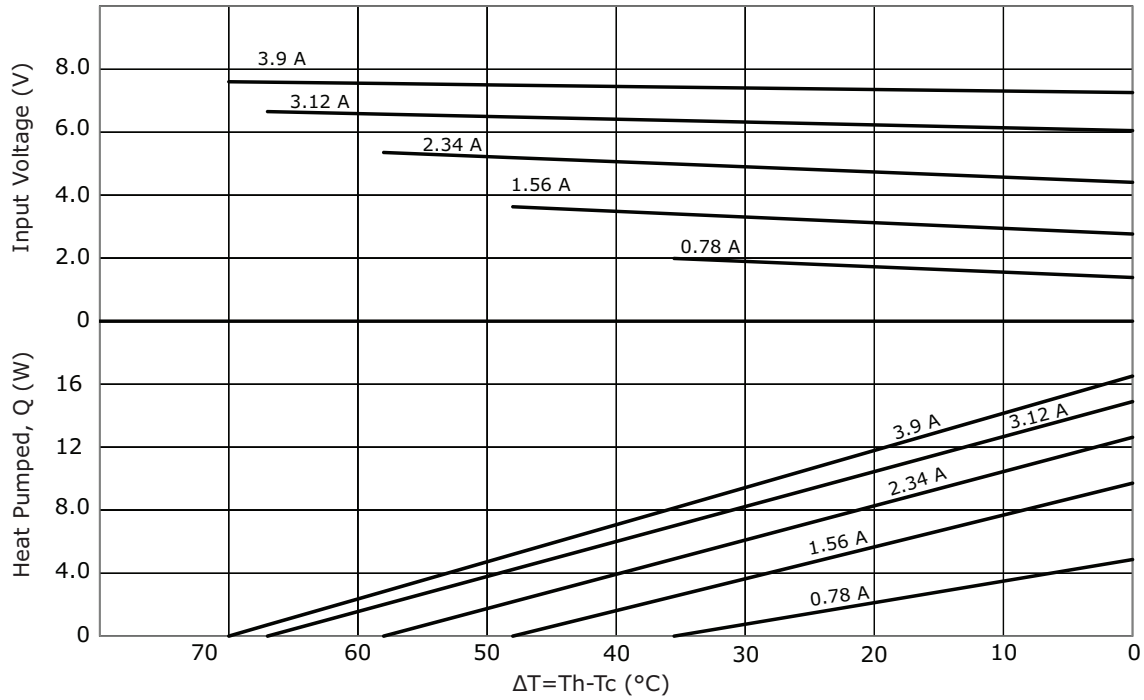
## CP39234030H PERFORMANCE (Th=27°C)



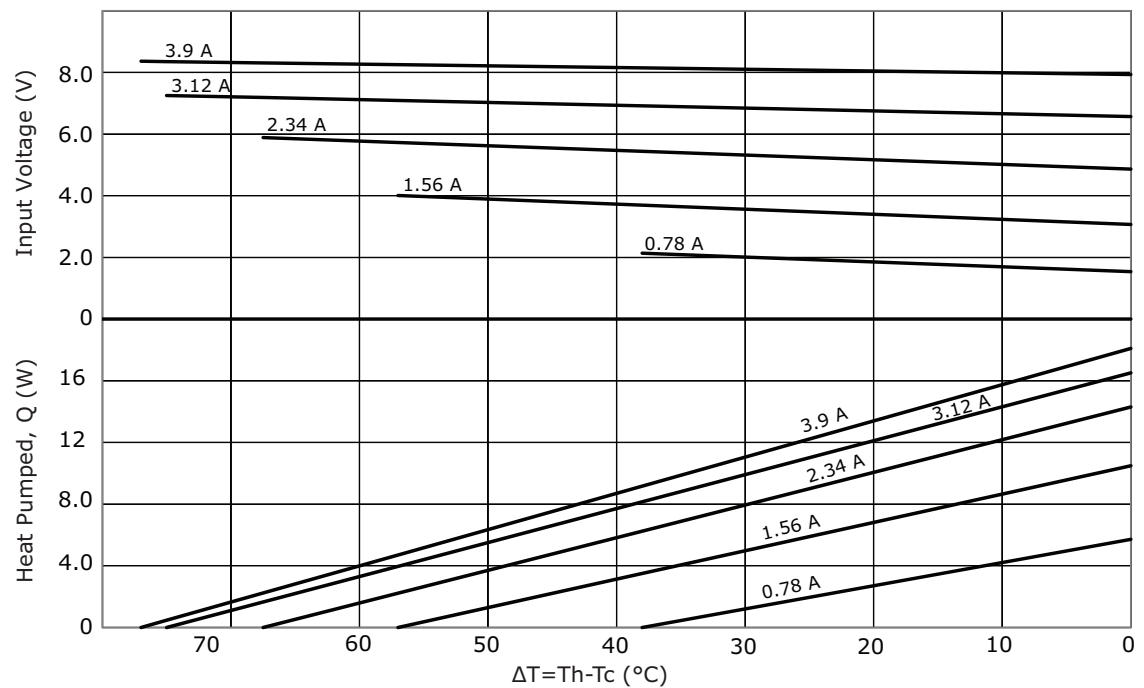
## CP39234030H PERFORMANCE (Th=50°C)



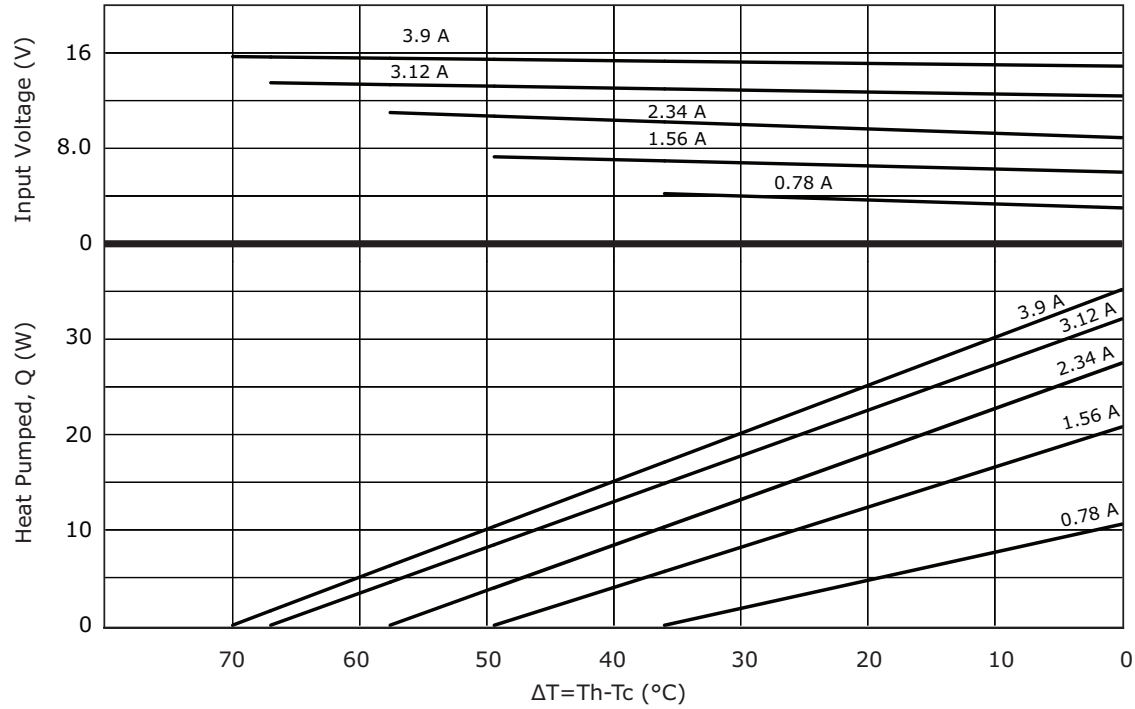
## CP39301536H PERFORMANCE (Th=27°C)



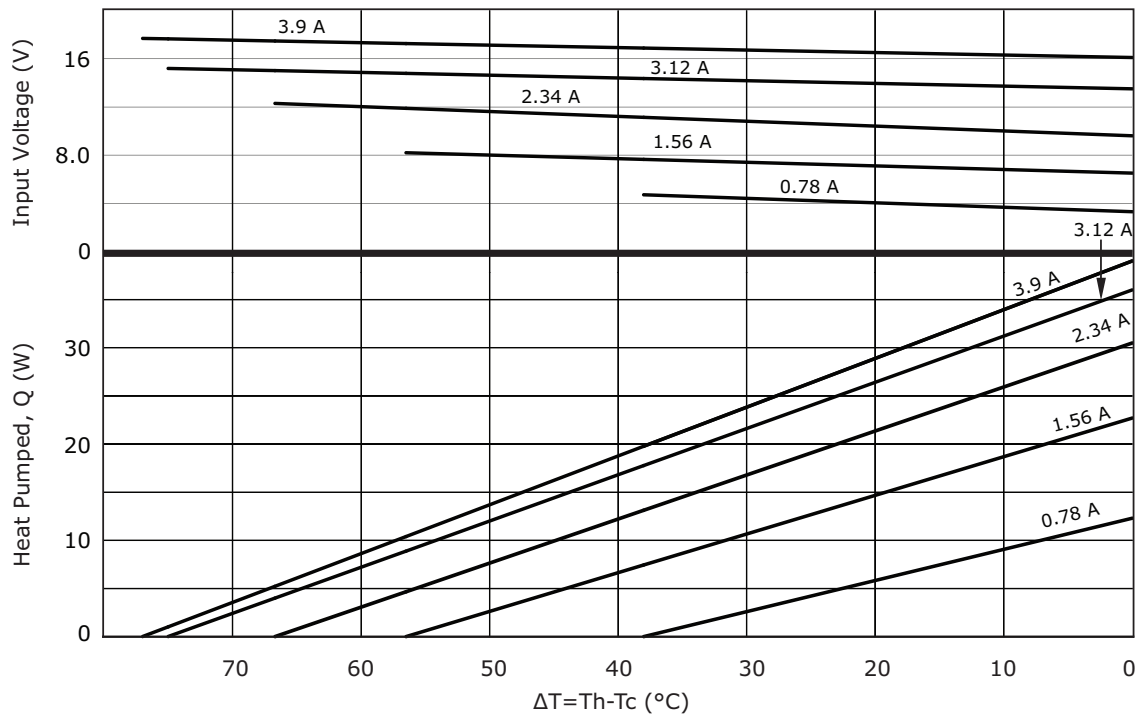
## CP39301536H PERFORMANCE (Th=50°C)



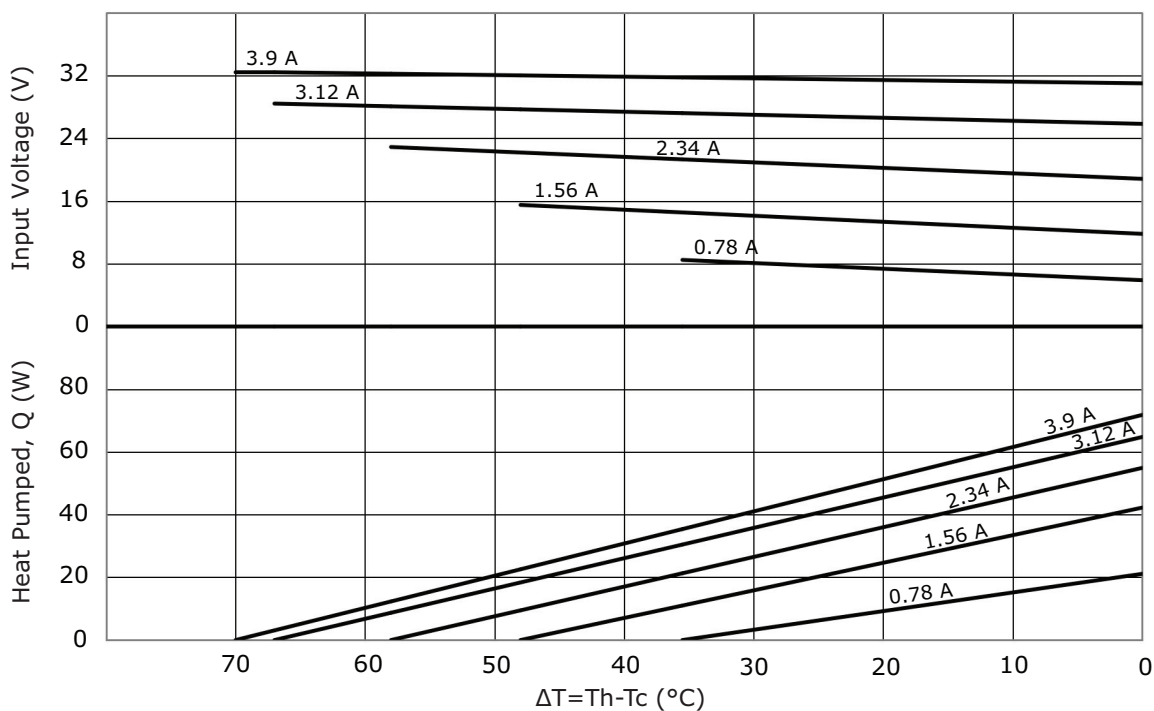
## CP393365H PERFORMANCE (Th=27°C)



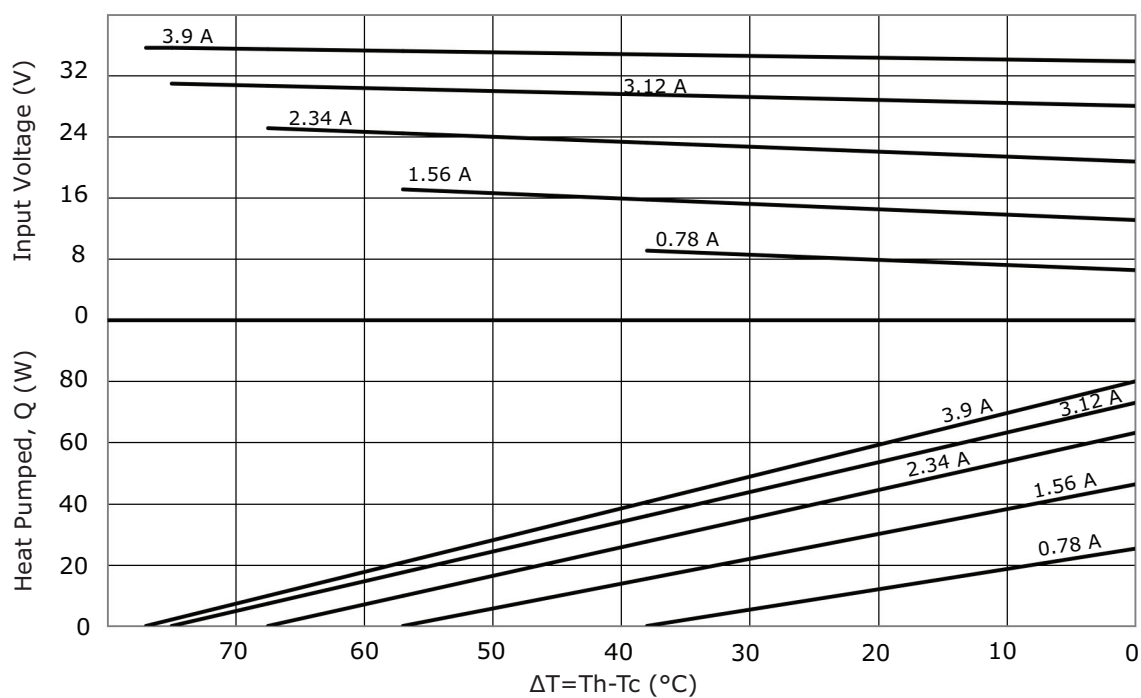
## CP393365H PERFORMANCE (Th=50°C)



## CP394044365 PERFORMANCE (Th=27°C)



## CP394044365 PERFORMANCE (Th=50°C)



REVISION HISTORY

| rev. | description                           | date       |
|------|---------------------------------------|------------|
| 1.0  | initial release                       | 09/08/2016 |
| 1.01 | updated datasheet                     | 09/25/2017 |
| 1.02 | added new model                       | 05/21/2018 |
| 1.03 | added model CP394044365, brand update | 10/16/2019 |
| 1.04 | added model CP39234030H               | 11/12/2020 |
| 1.05 | logo, datasheet style update          | 08/05/2022 |
| 1.06 | 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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