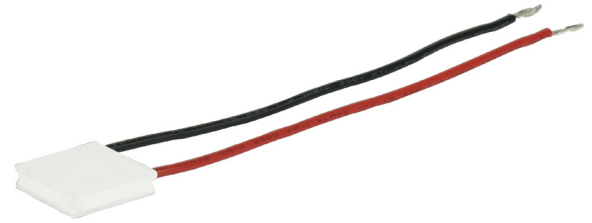


**SERIES:** CP39H | **DESCRIPTION:** PELTIER MODULE**FEATURES**

- 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> |                                  |
|--------------------------|-----------------------------------------------|---------------------------------------------|---------------------------------------------------------------------|---------------------------------|---------------------------------|-----------------------------------------|----------------------------------|
|                          |                                               |                                             |                                                                     | $T_h = 27^\circ\text{C}$<br>[W] | $T_h = 50^\circ\text{C}$<br>[W] | $T_h = 27^\circ\text{C}$<br>[°C]        | $T_h = 50^\circ\text{C}$<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 $\pm 5\%$                                                      | 71.8                            | 80.0                            | 70                                      | 77                               |

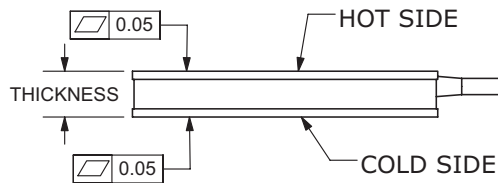
Notes: 1. Maximum voltage at  $\Delta T_{max}$  and  $T_h = 27^\circ\text{C}$   
 2. Maximum current to achieve  $\Delta T_{max}$   
 3. Measured by AC 4-terminal method at  $25^\circ\text{C}$   
 4. Maximum heat absorbed at cold side occurs at  $I_{max}$ ,  $V_{max}$ , and  $\Delta T = 0^\circ\text{C}$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

## SPECIFICATIONS

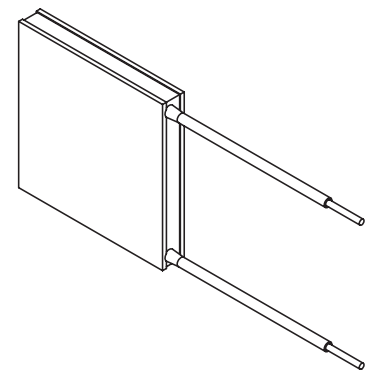
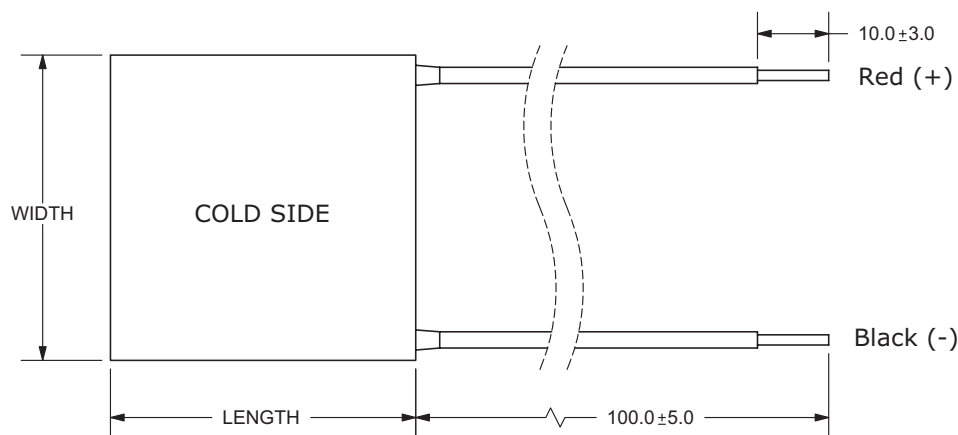
| parameter                  | conditions/description                  | min | typ | max | units |
|----------------------------|-----------------------------------------|-----|-----|-----|-------|
| solder melting temperature | connection between thermoelectric pairs | 235 |     |     | °C    |
| assembly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

## MECHANICAL DRAWING

units: mm

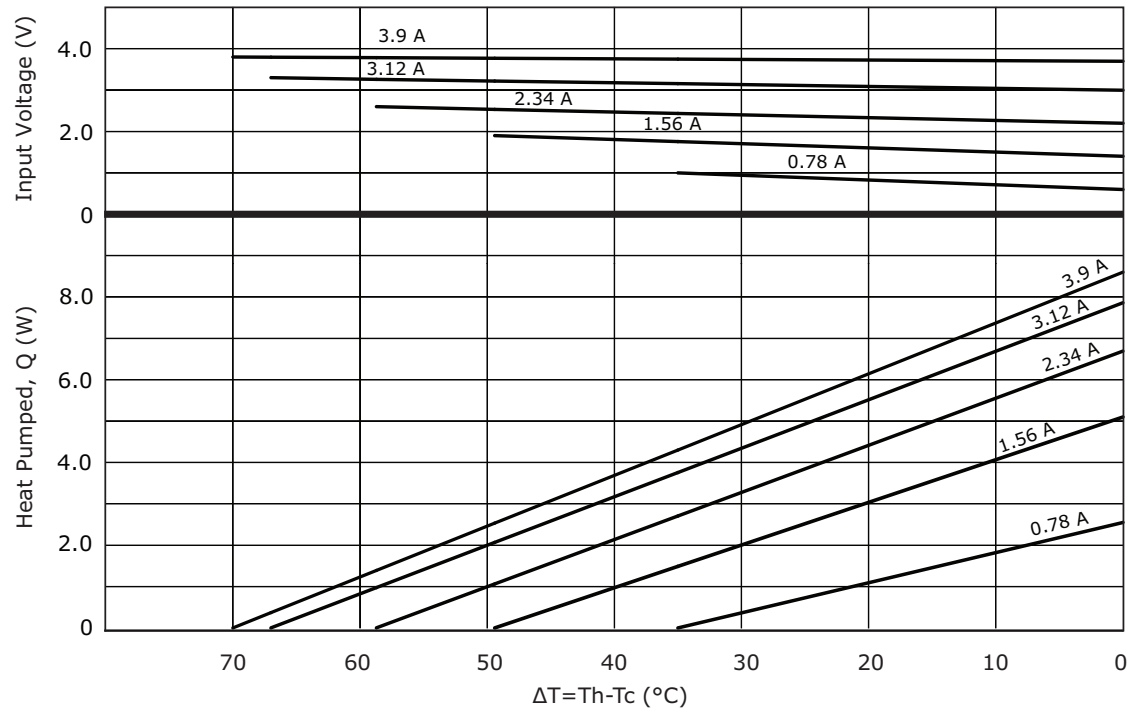


|               | MATERIAL                                                  | PLATING |
|---------------|-----------------------------------------------------------|---------|
| ceramic plate | 96% $Al_2O_3$                                             |         |
| wire leads    | 22 AWG                                                    | 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                    |         |

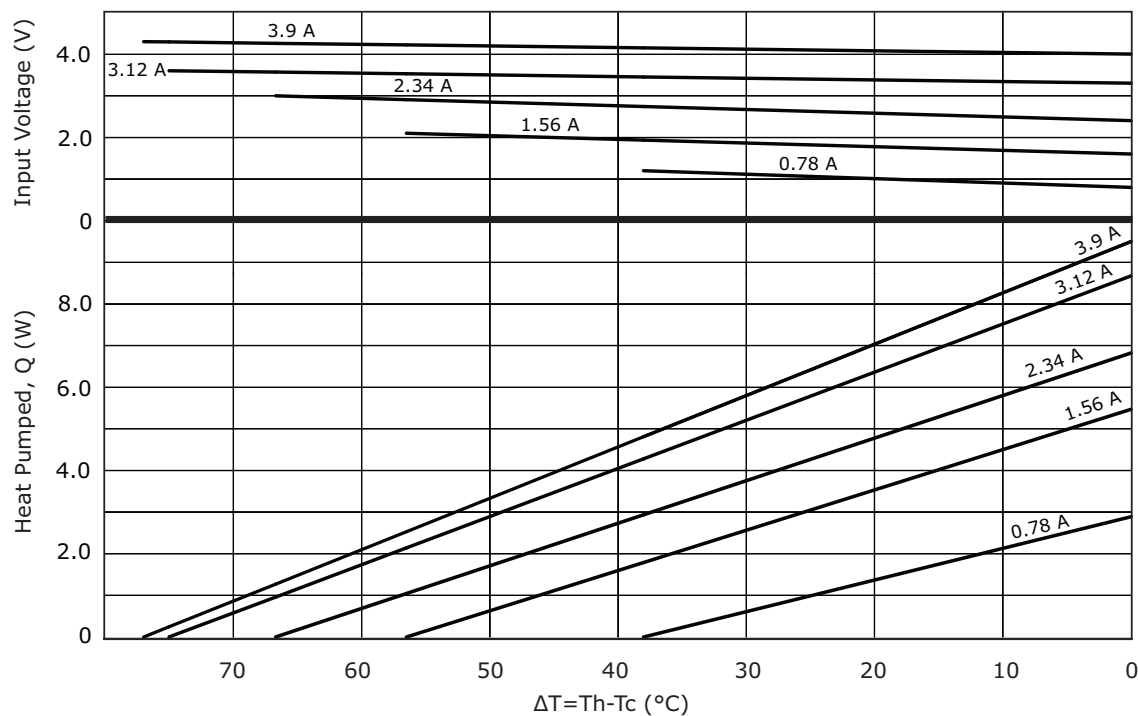


| MODEL NO.   | LENGTH (mm) | WIDTH (mm) | THICKNESS (mm) |
|-------------|-------------|------------|----------------|
| CP39136H    | 15 ± 0.3    | 15 ± 0.3   | 3.6 ± 0.025    |
| CP39236H    | 20 ± 0.3    | 20 ± 0.3   | 3.6 ± 0.025    |
| CP39234030H | 23 ± 0.3    | 40 ± 0.3   | 3.0 ± 0.05     |
| 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     |

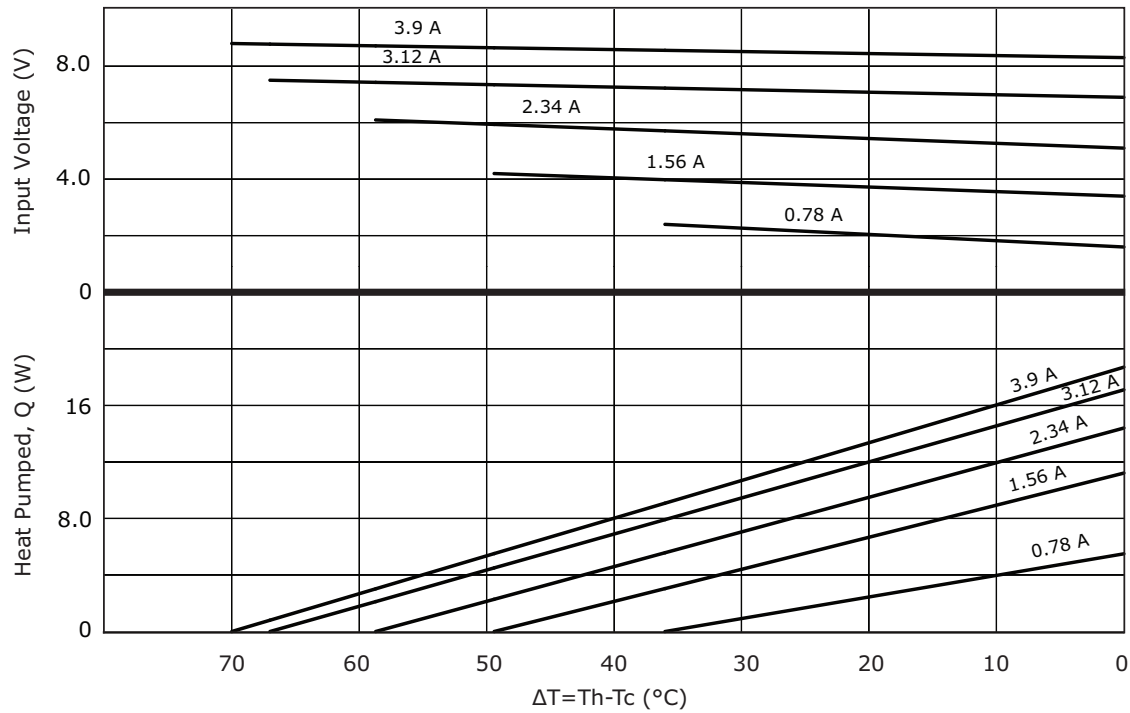
## CP39136H PERFORMANCE (Th=27°C)



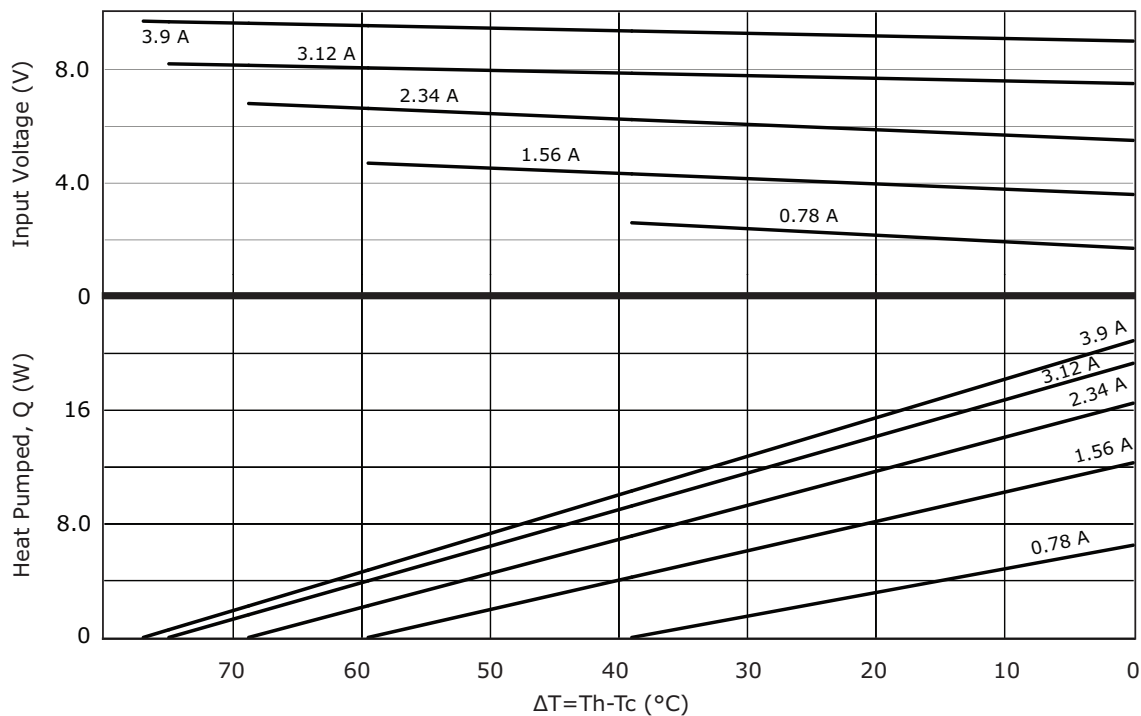
## CP39136H PERFORMANCE (Th=50°C)



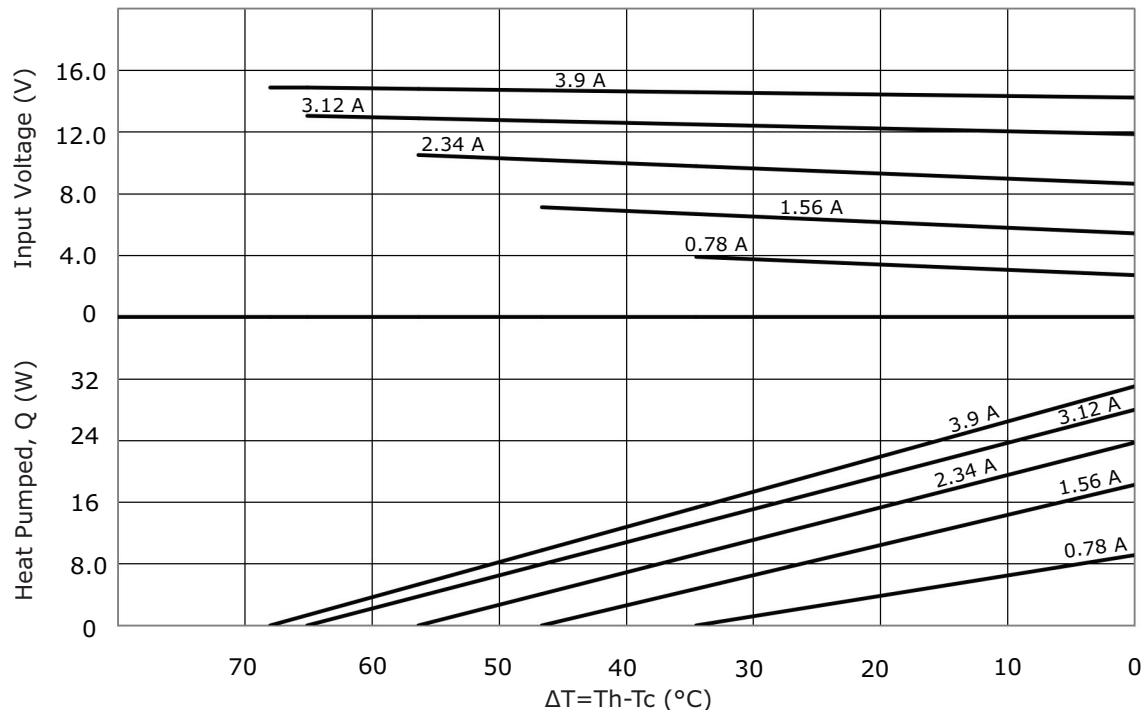
## CP39236H PERFORMANCE (Th=27°C)



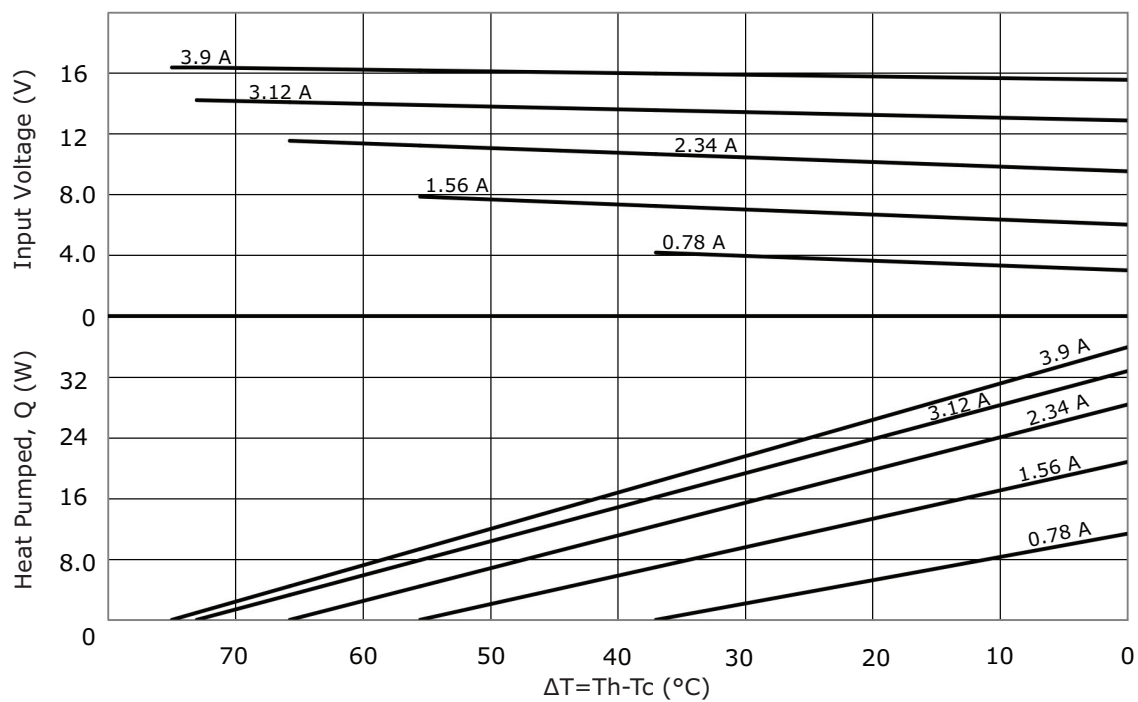
## CP39236H PERFORMANCE (Th=50°C)



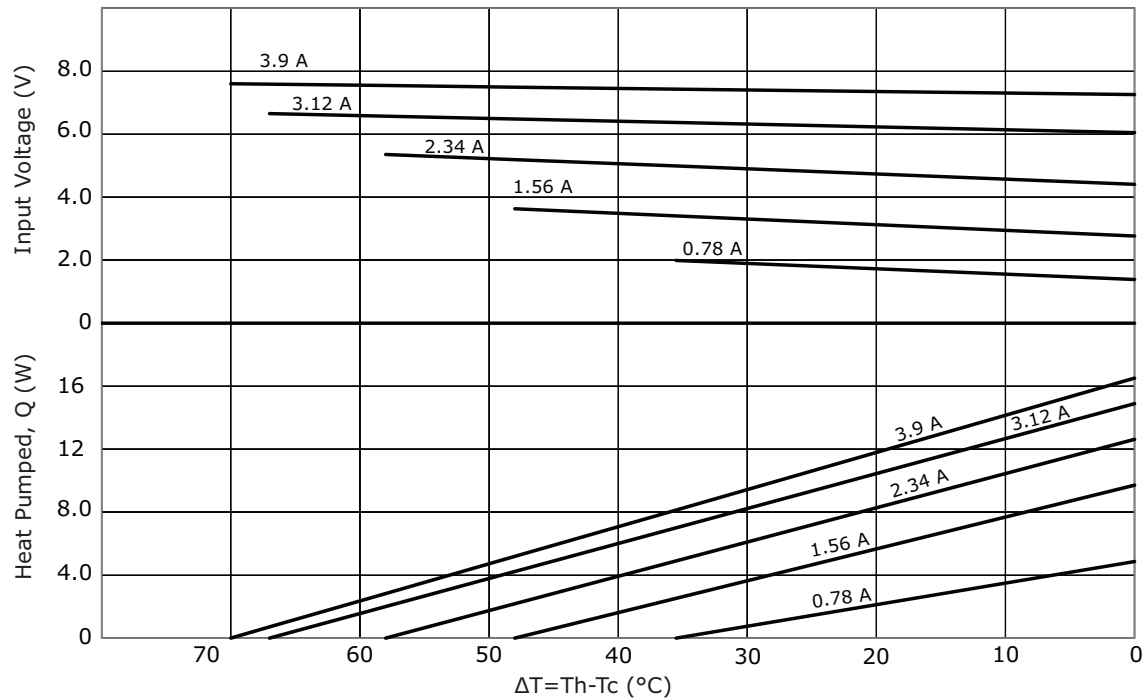
## CP39234030H PERFORMANCE (Th=27°C)



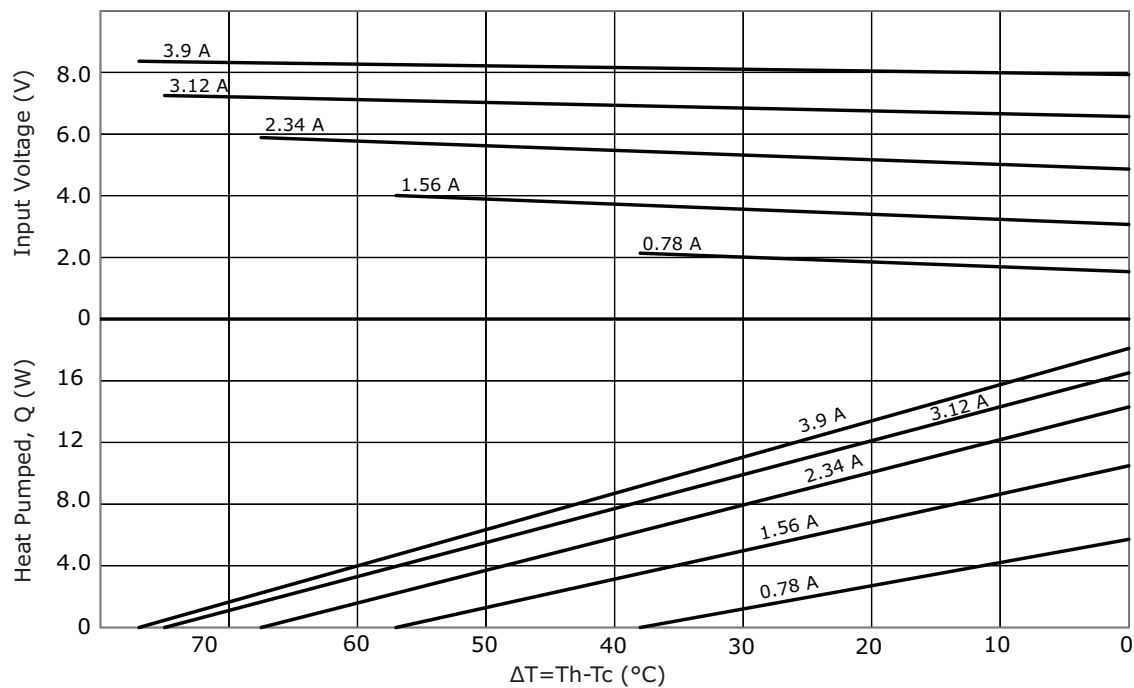
## CP39234030H PERFORMANCE (Th=50°C)



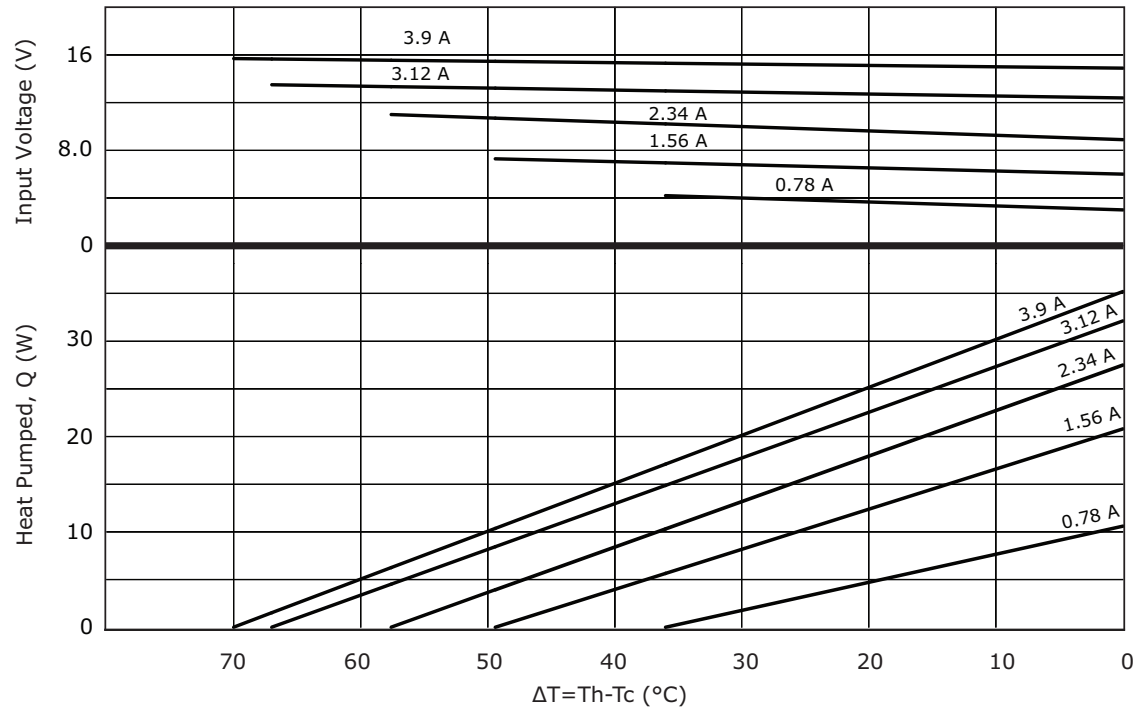
## CP39301536H PERFORMANCE (Th=27°C)



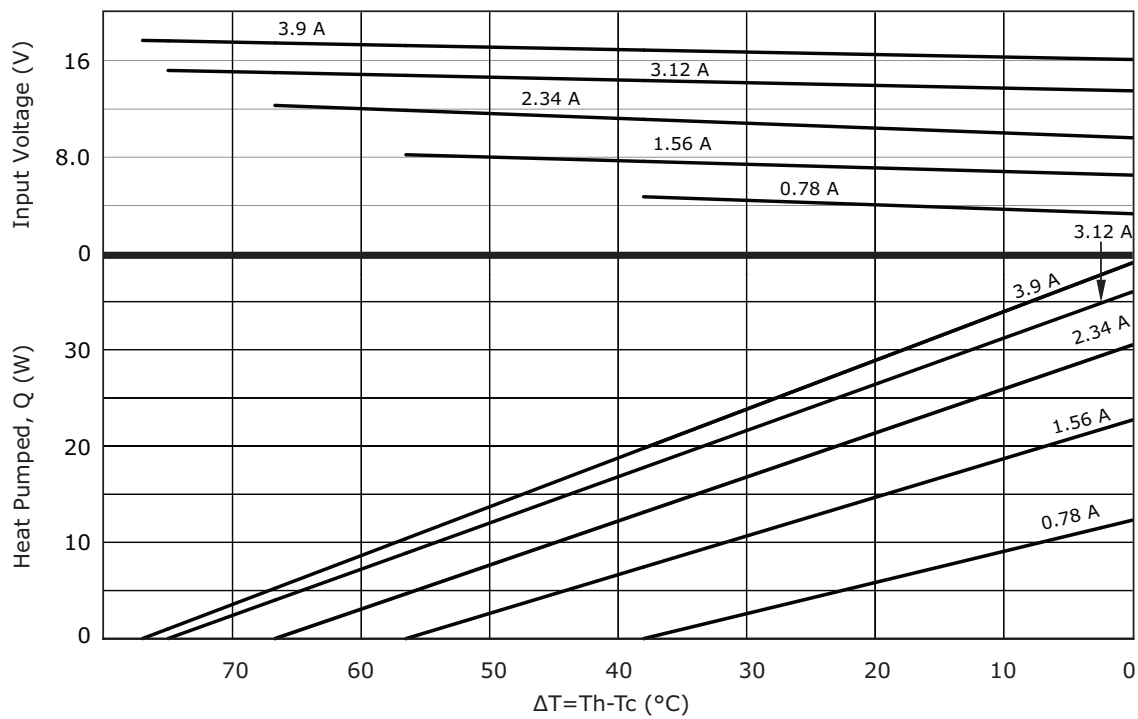
## CP39301536H PERFORMANCE (Th=50°C)



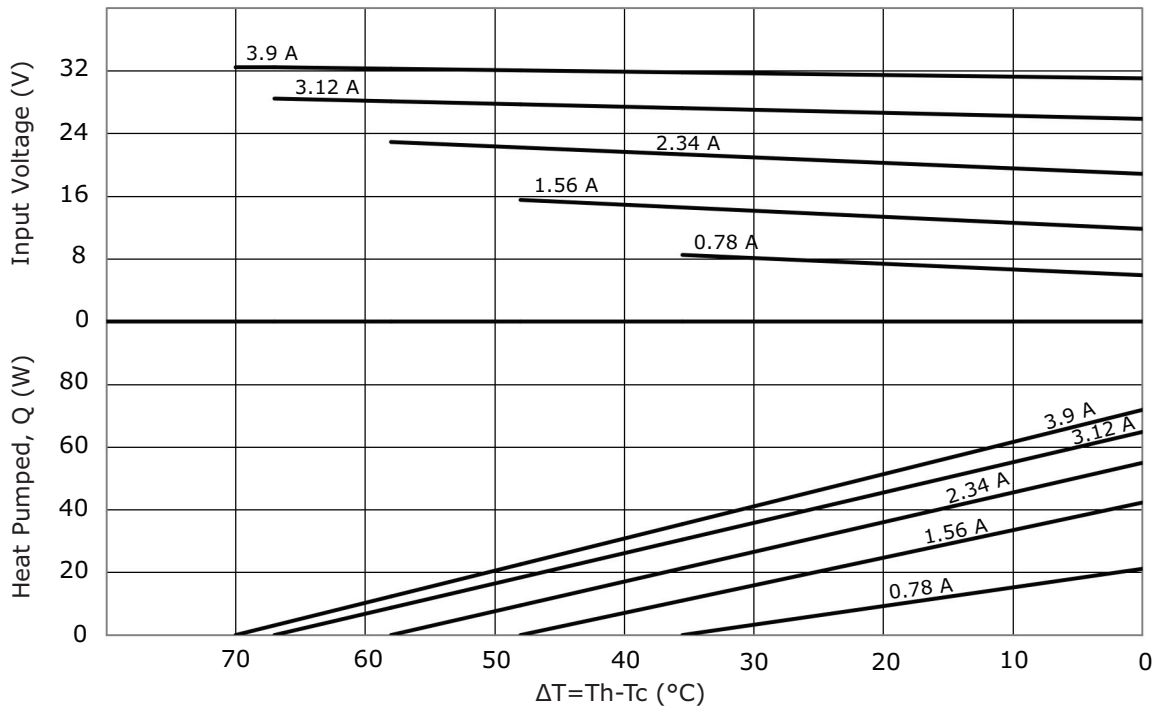
## CP393365H PERFORMANCE (Th=27°C)



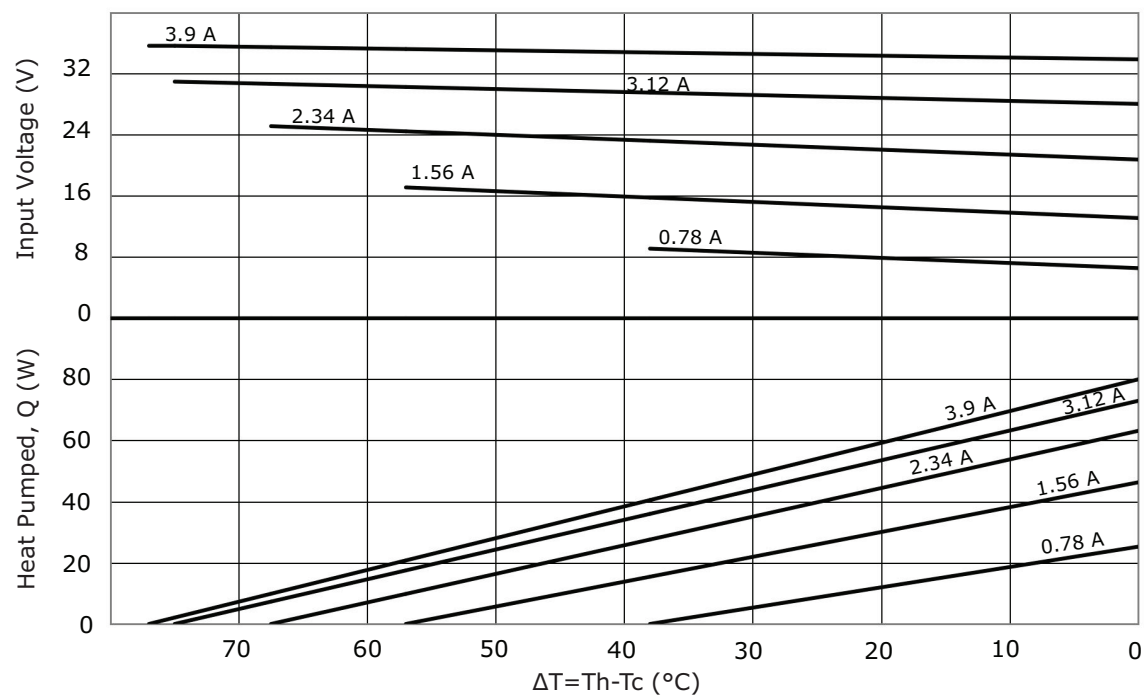
## CP393365H PERFORMANCE (Th=50°C)



## 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 |

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



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