



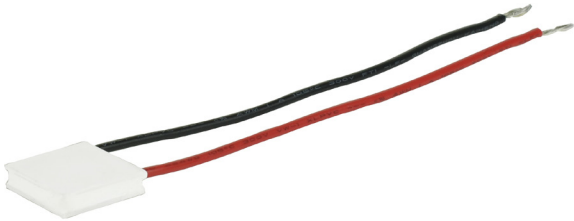
SERIES: CP39H

|

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)

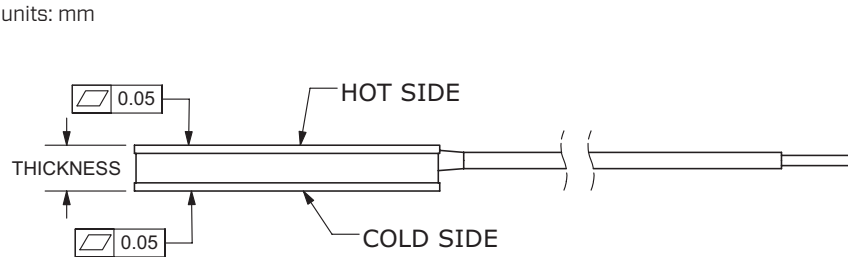
6. Designed with arcTEC™ structure.

SPECIFICATIONS

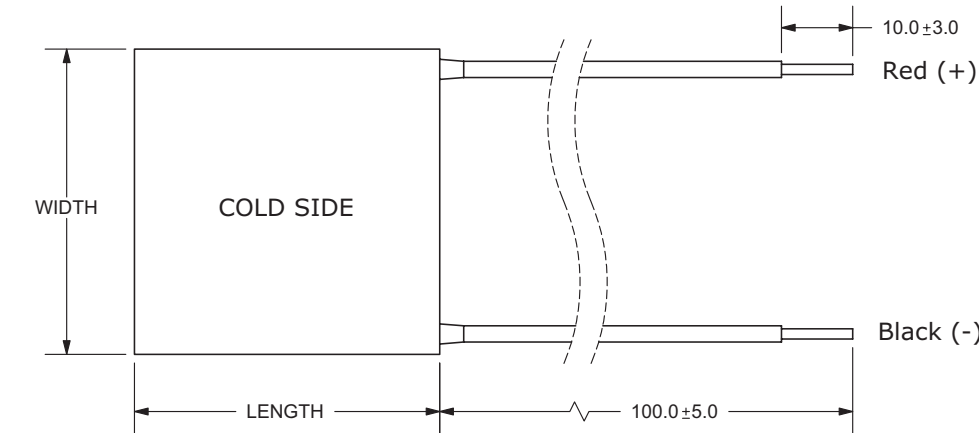
| parameter                  | conditions/description                  | min | typ | max | units |
|----------------------------|-----------------------------------------|-----|-----|-----|-------|
| solder melting temperature | connection between thermoelectric pairs | 235 |     |     | °C    |
| assembly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

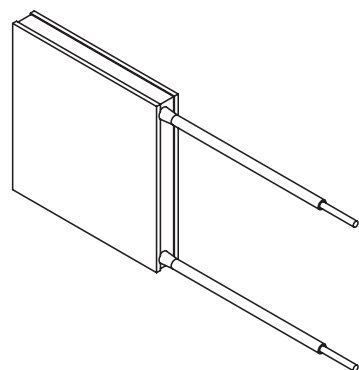
MECHANICAL DRAWING

units: mm



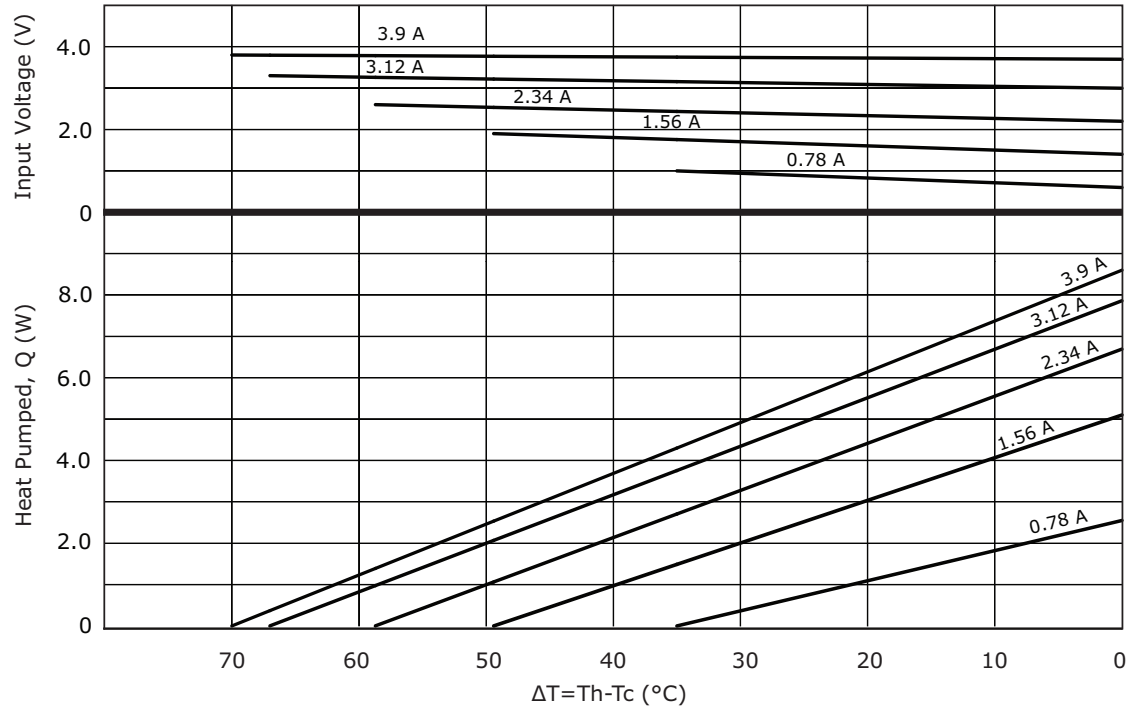
|               | MATERIAL                                                  | PLATING |
|---------------|-----------------------------------------------------------|---------|
| ceramic plate | 96% AL <sub>2</sub> O <sub>3</sub>                        |         |
| wire leads    | 22 AWG            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



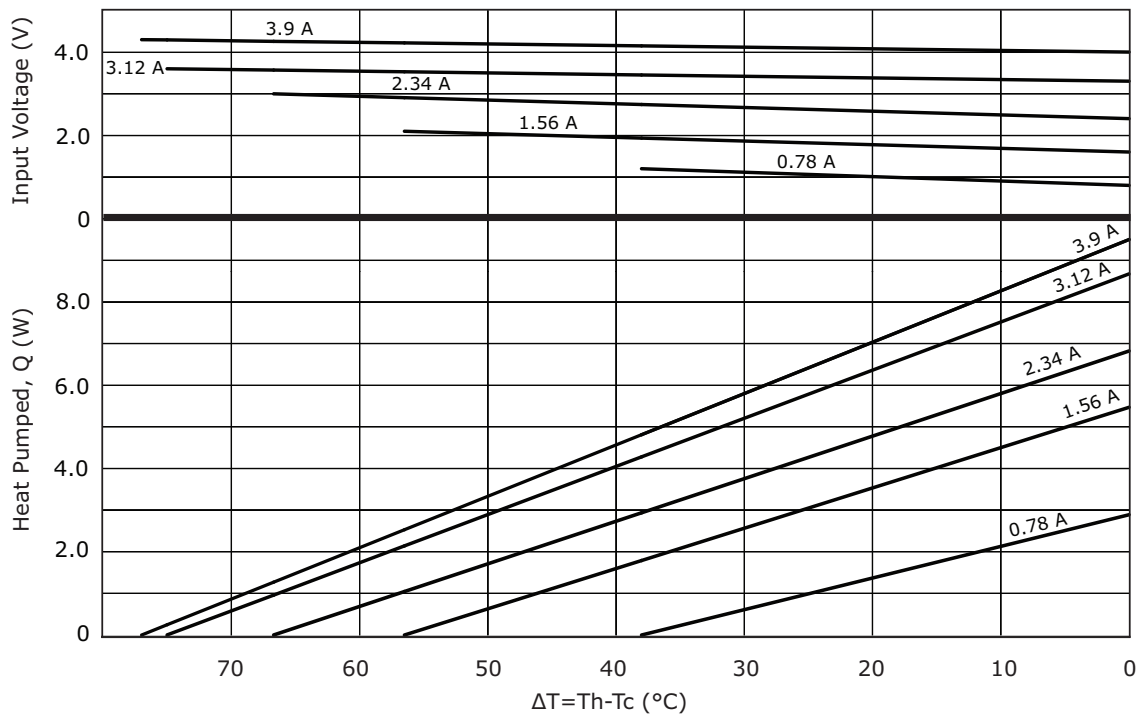


| MODEL NO.   | LENGTH (mm) | WIDTH (mm) | THICKNESS (mm) |
|-------------|-------------|------------|----------------|
| CP39136H    | 15 ±0.3     | 15 ±0.3    | 3.6 ±0.025     |
| CP39236H    | 20 ±0.3     | 20 ±0.3    | 3.6 ±0.025     |
| CP39234030H | 23 ±0.3     | 40 ±0.3    | 3.0 ±0.05      |
|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

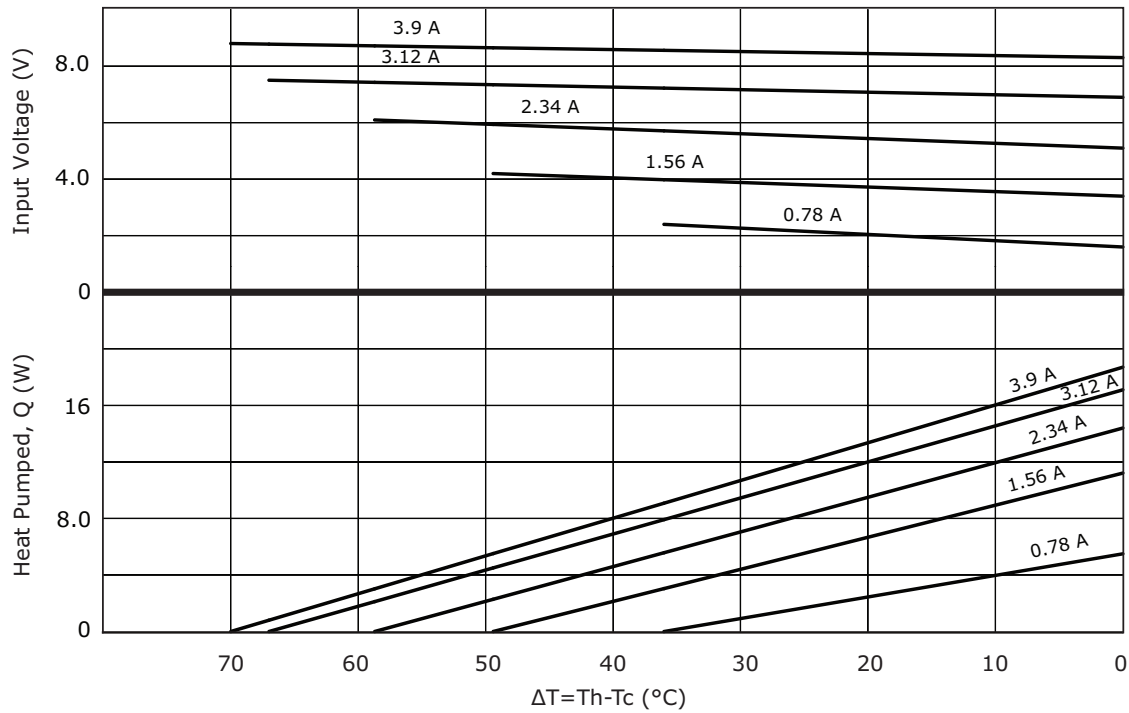
## CP39136H PERFORMANCE (Th=27°C)



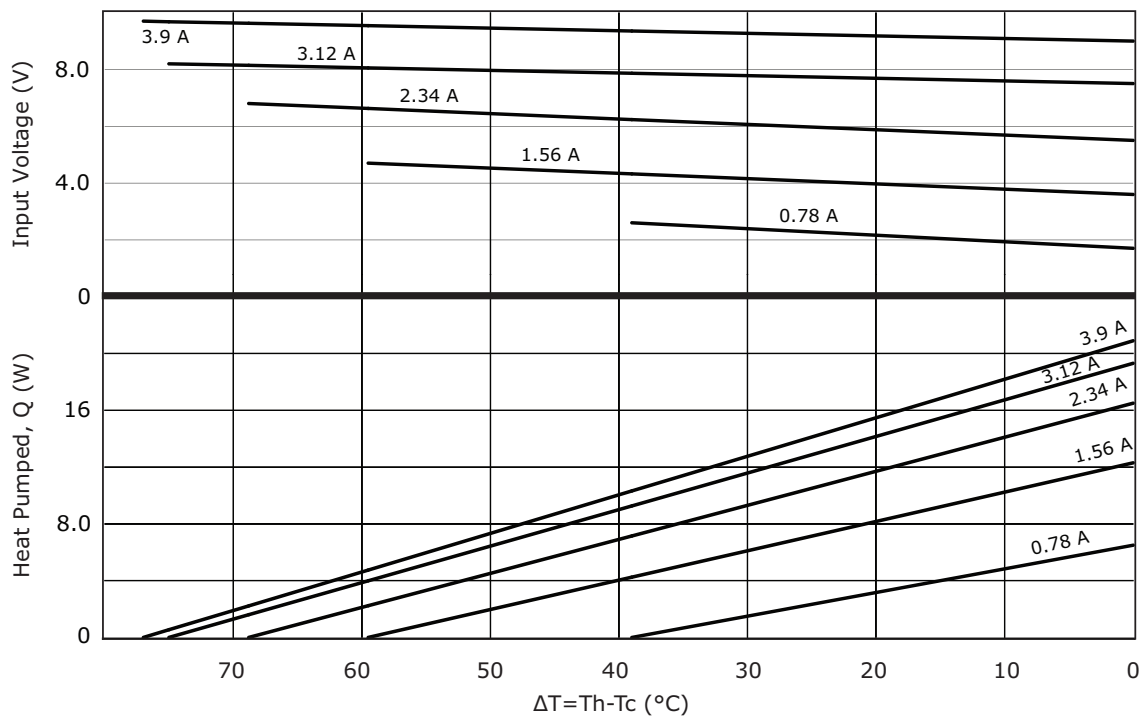
## CP39136H PERFORMANCE (Th=50°C)



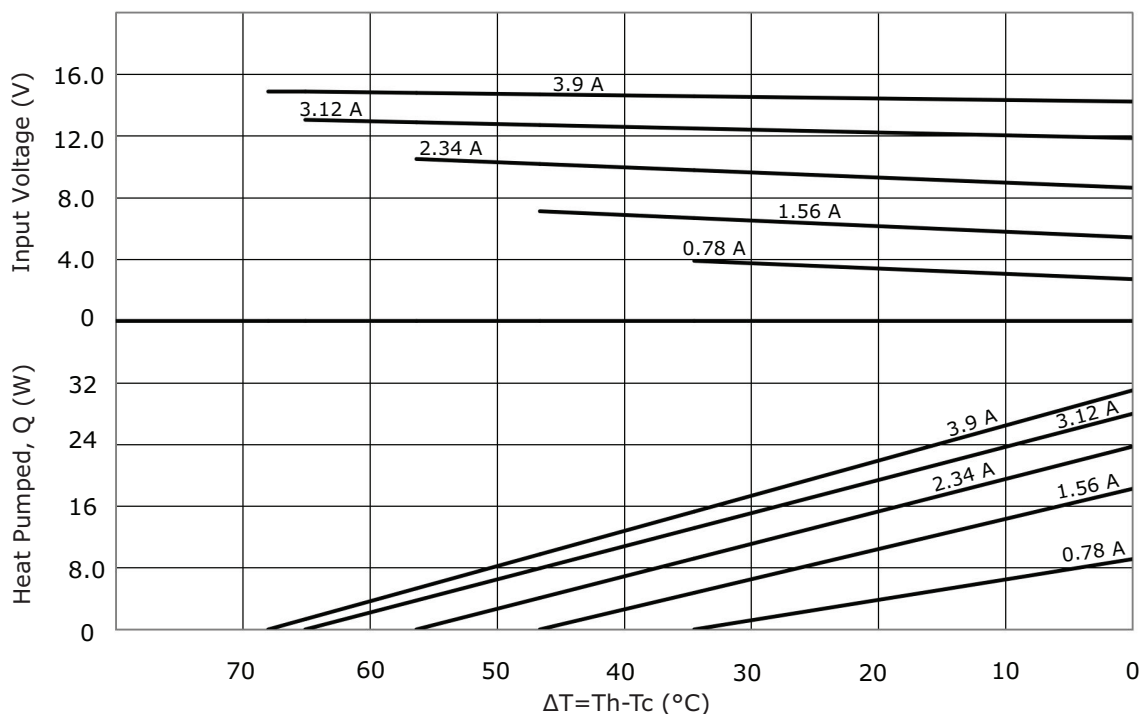
## CP39236H PERFORMANCE (Th=27°C)



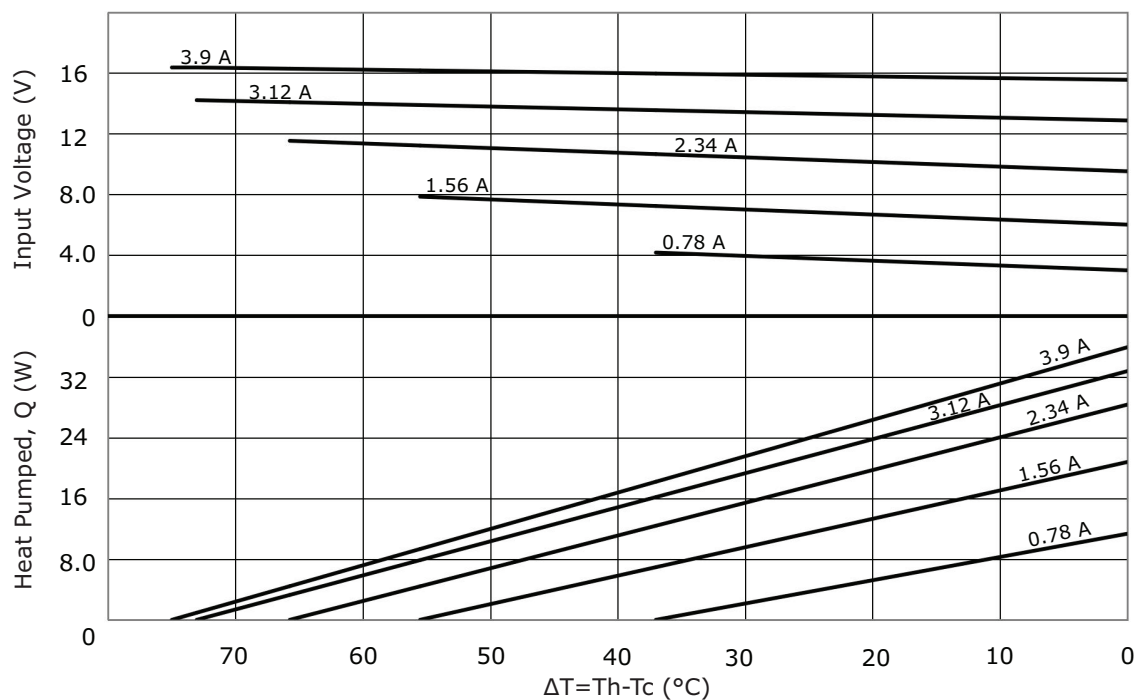
## CP39236H PERFORMANCE (Th=50°C)



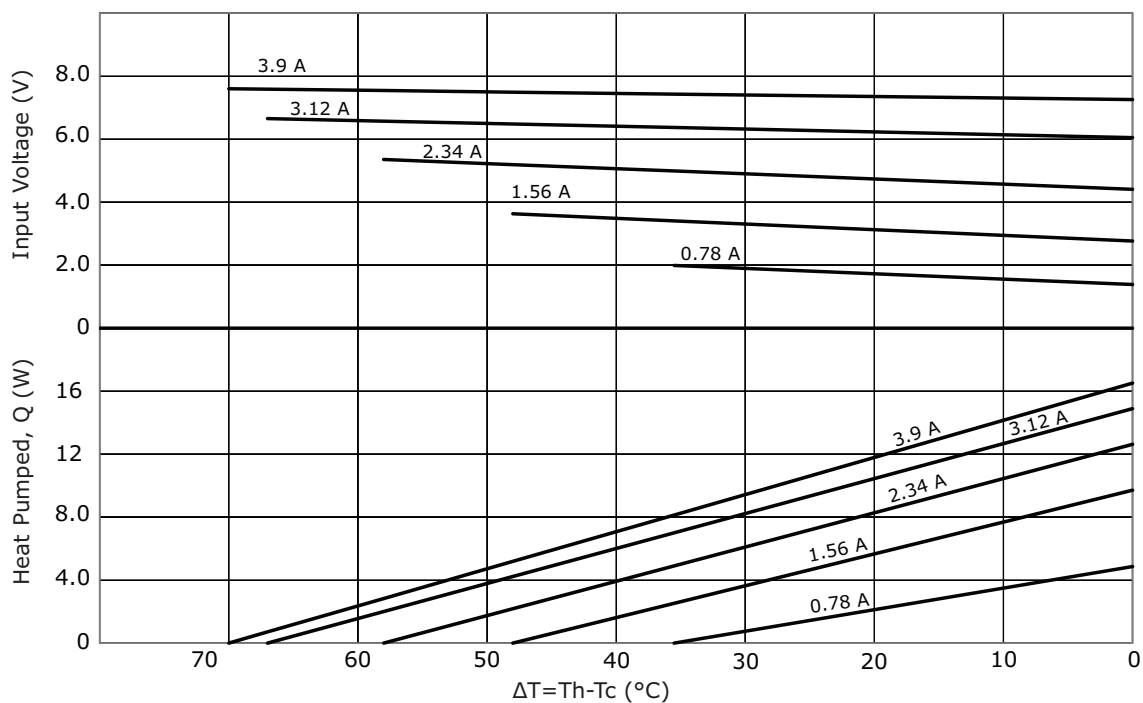
## CP39234030H PERFORMANCE (Th=27°C)



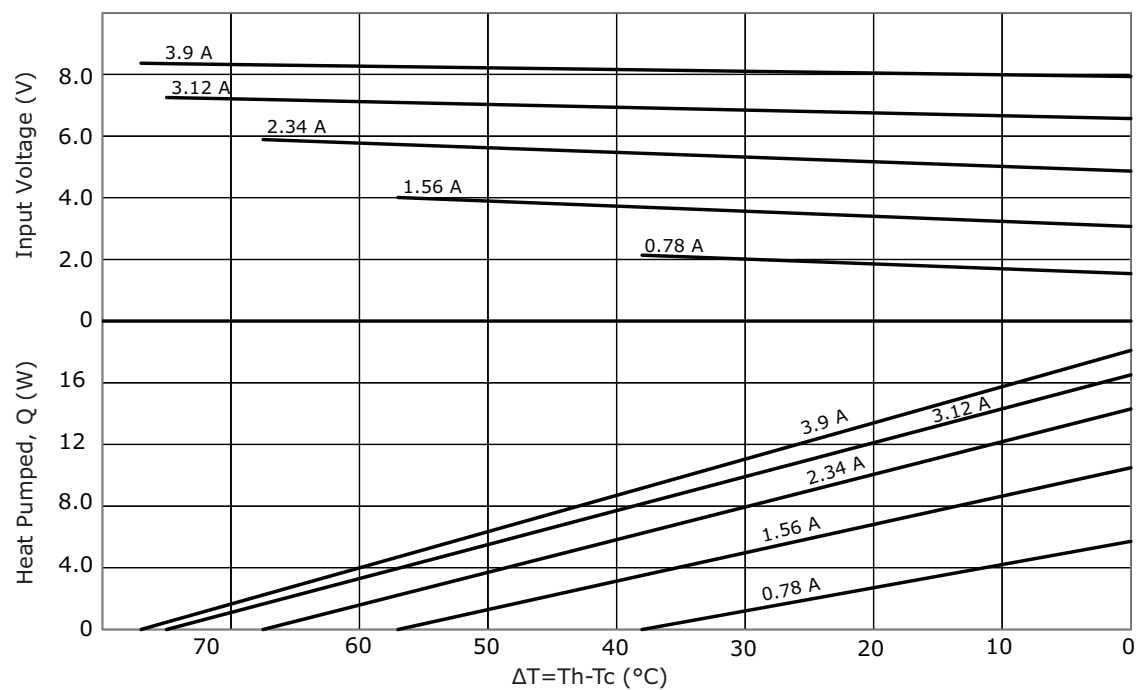
## CP39234030H PERFORMANCE (Th=50°C)



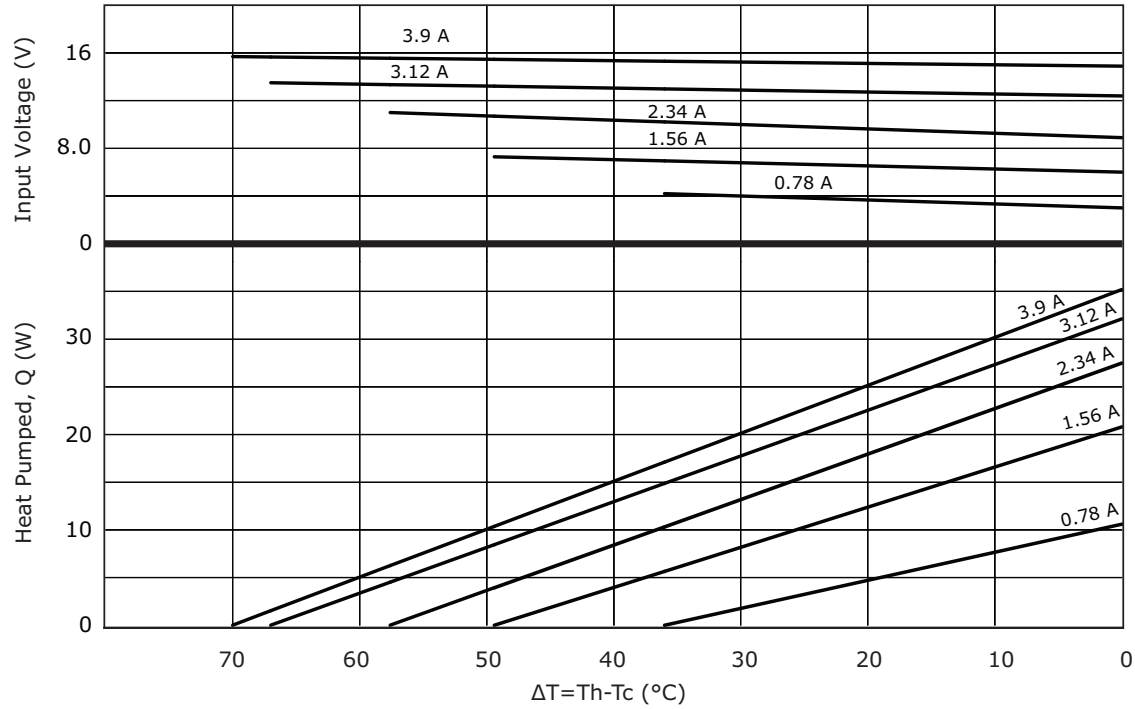
## CP39301536H PERFORMANCE (Th=27°C)



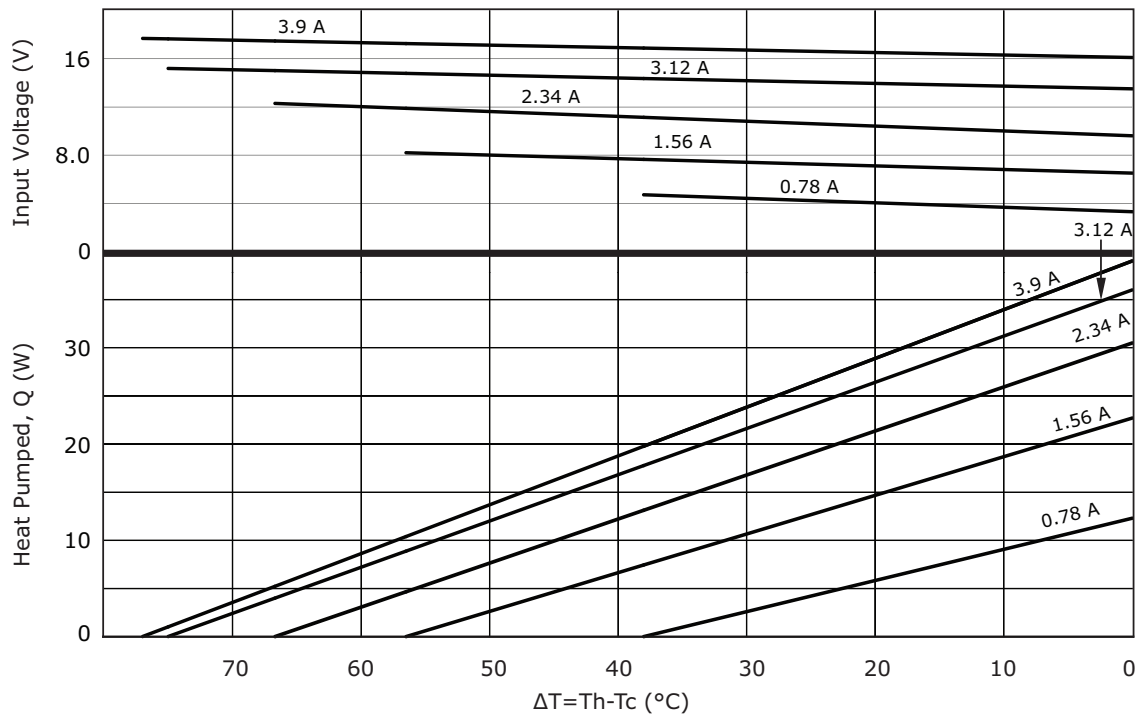
## CP39301536H PERFORMANCE (Th=50°C)



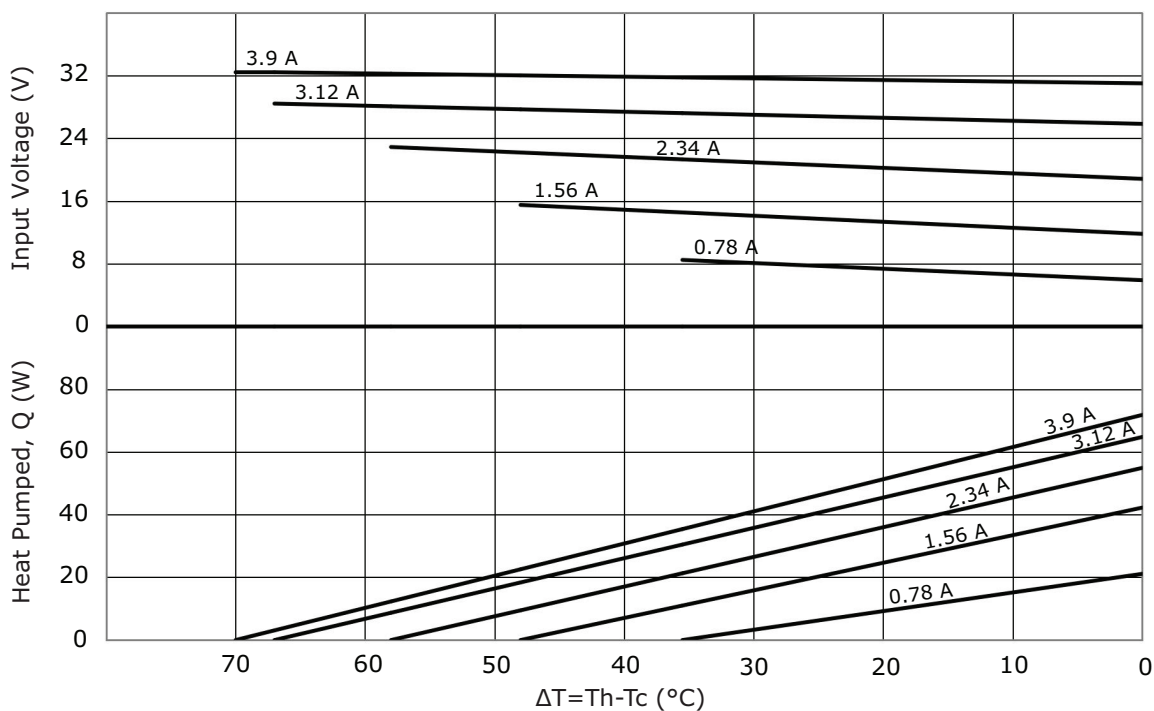
## CP393365H PERFORMANCE (Th=27°C)



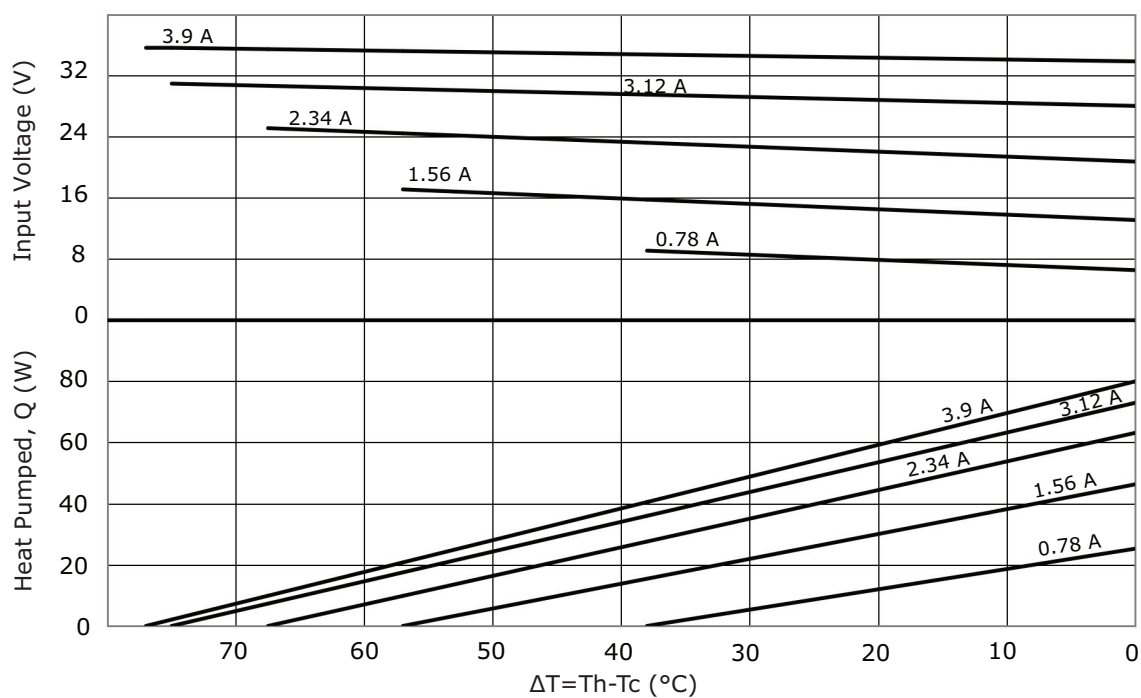
## CP393365H PERFORMANCE (Th=50°C)



## 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.

Same Sky reserves the right to make changes to the product at any time without notice. Information provided by Same Sky is believed to be accurate and reliable. However, no responsibility is assumed by Same Sky for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

Same Sky products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

**sameskydevices.com**