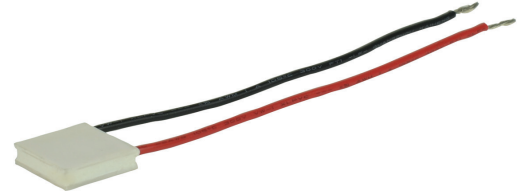


**SERIES:** CP39H | **DESCRIPTION:** PELTIER MODULE

**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

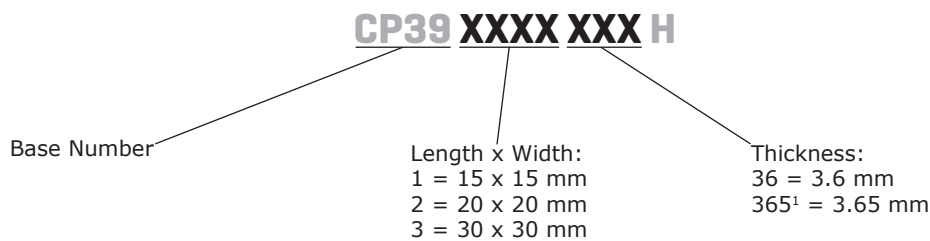


**MODEL**

| MODEL                  | input voltage <sup>1</sup><br>max<br>(Vdc) | input current <sup>2</sup><br>max<br>(A) | output Qmax <sup>3</sup>    |                             | output $\Delta T$ max <sup>4</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                                      | 8.6                         | 9.5                         | 70                                 | 77                           |
| CP39236H               | 8.8  | 3.9                                      | 18.7                        | 20.9                        | 70                                 | 77                           |
| CP393365H <sup>5</sup> | 15.7                                       | 3.9                                      | 35.2                        | 39.0                        | 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. Maximum heat absorbed at cold side occurs at I<sub>max</sub>, V<sub>max</sub>, and  $\Delta T=0^{\circ}\text{C}$
  4. 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)
  5. Designed with arcTEC™ structure.

**PART NUMBER KEY**



- Notes:
1. Only available in 30 x 30 mm size

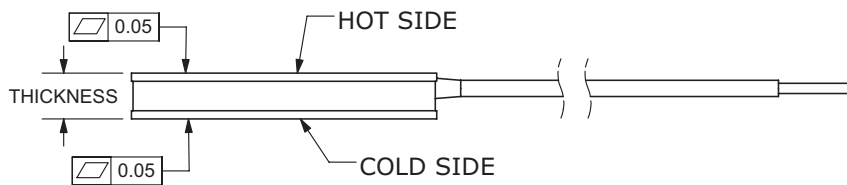
## SPECIFICATIONS

| parameter                        | conditions/description                  | min   | typ  | max   | units |
|----------------------------------|---|-------|------|-------|-------|
| internal resistance <sup>1</sup> | CP39136H                                | 0.765 | 0.85 | 0.935 | Ω     |
|                                  | CP39236H                                | 1.755 | 1.95 | 2.145 | Ω     |
|                                  | CP393365H                               | 3.15  | 3.50 | 3.85  | Ω     |
| solder melting temperature       | connection between thermoelectric pairs | 235   |      |       | °C    |
| assembly compression             |   |       |      | 1     | MPa   |
| hot side plate                   |   |       |      | 80    | °C    |
| RoHS                             | 2011/65/EU                              |       |      |       |       |

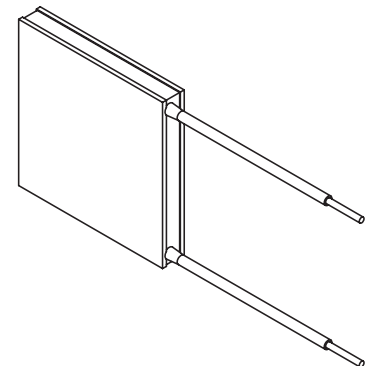
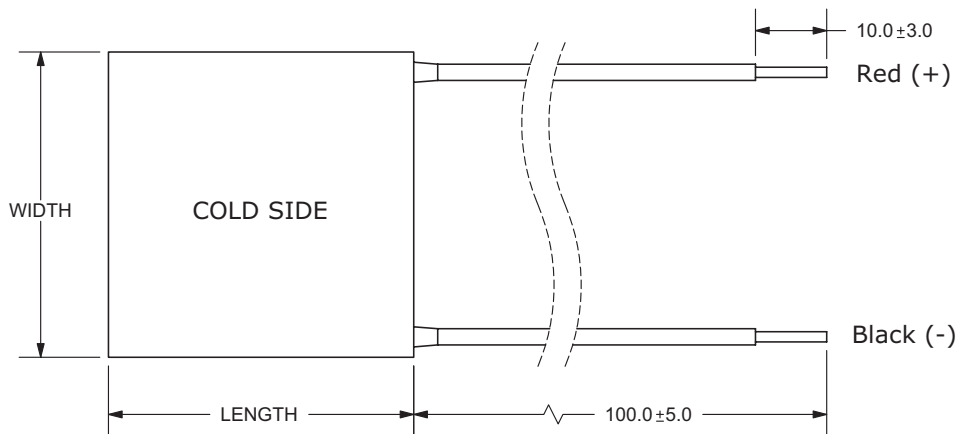
Note: 1. Measured by AC 4-terminal method at 25°C

## MECHANICAL DRAWING

units: mm

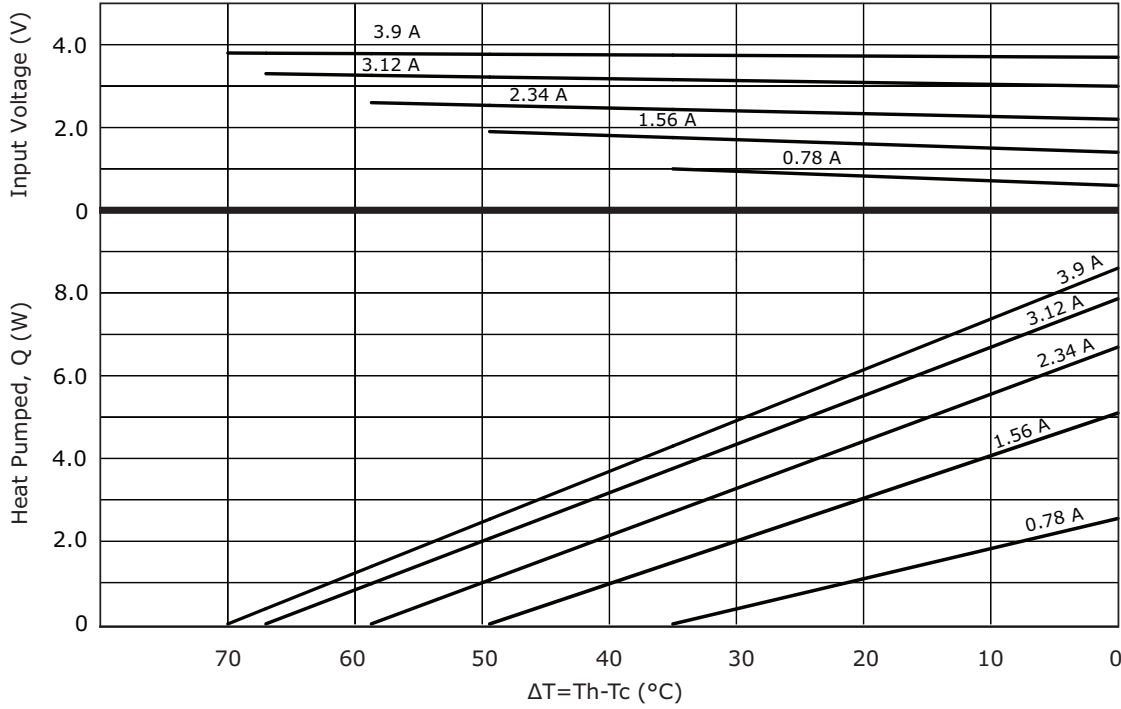


|               | MATERIAL  | PLATING |
|---------------|---|---------|
| ceramic plate | 96% AL <sub>2</sub> O <sub>3</sub>                        |         |
| wire leads    | 22 AWG  | tin     |
| sealer        | silicon rubber 703 RTV (between cold and hot side plates) |         |
| joint cover   | silicon rubber 703 RTV                                    |         |
| marking       | P/N & S/N printed on cold side surface                    |         |

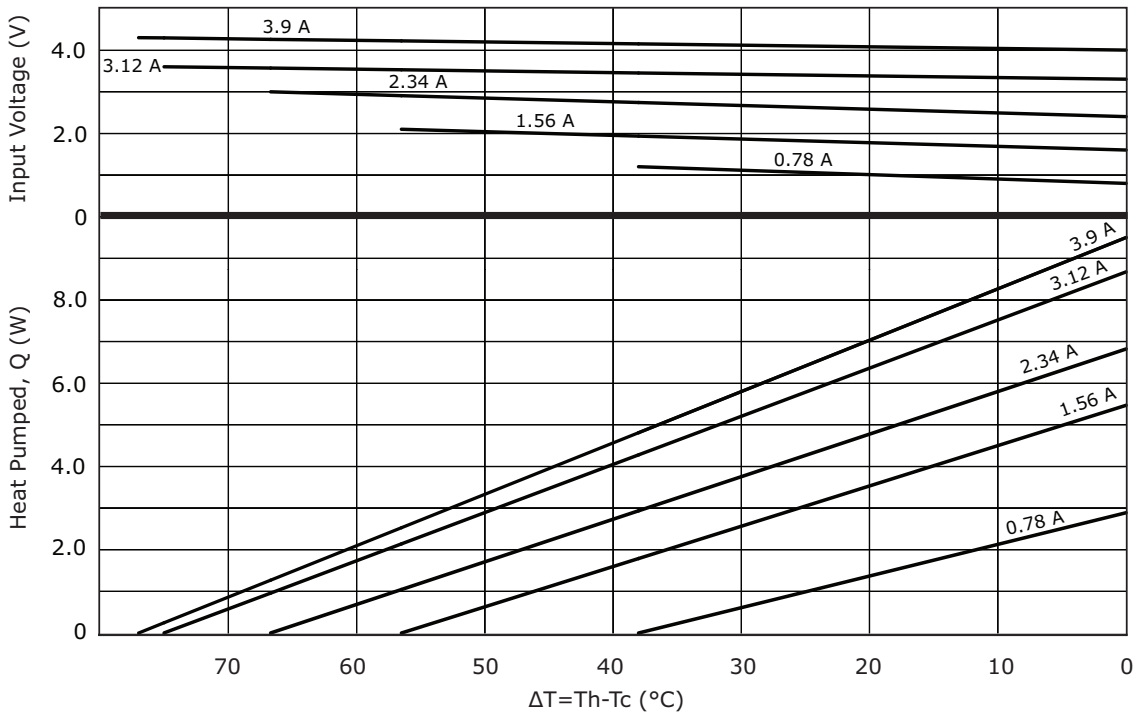


| MODEL NO. | LENGTH (mm) | WIDTH (mm) | THICKNESS (mm) |
|-----------|-------------|------------|----------------|
| CP39136H  | 15 ±0.3     | 15 ±0.3    | 3.6 ±0.025     |
| CP39236H  | 20 ±0.3     | 20 ±0.3    | 3.6 ±0.025     |
| CP393365H | 30 ±0.3     | 30 ±0.3    | 3.65 ±0.025    |

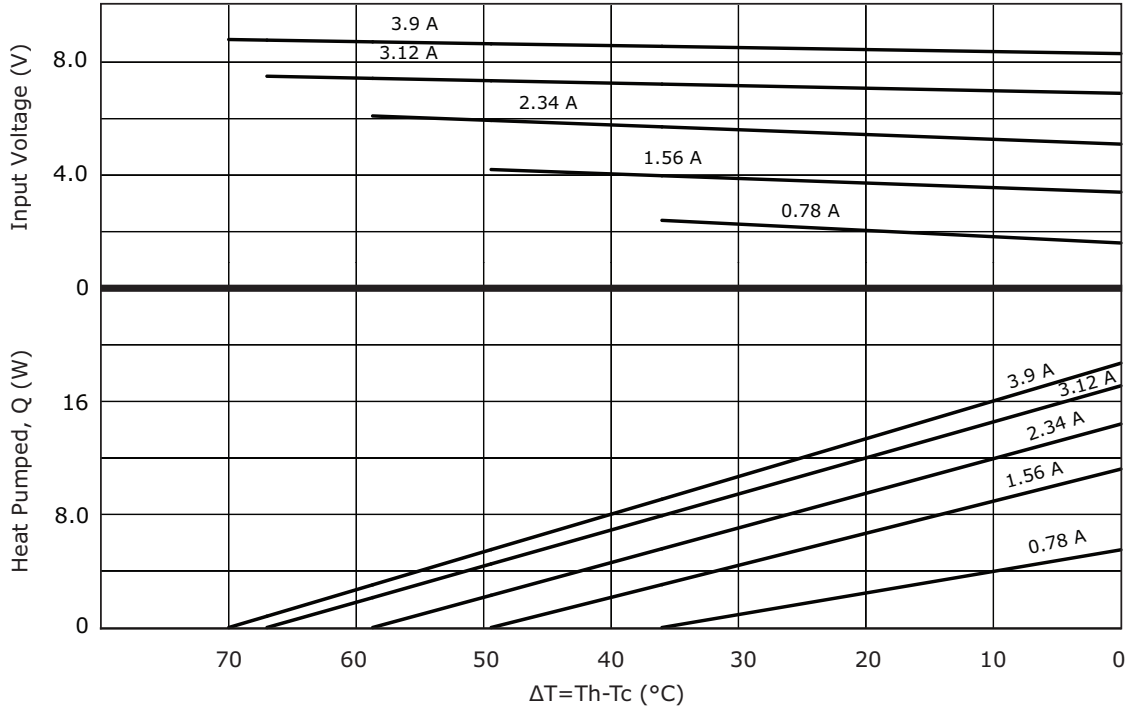
### CP39136H PERFORMANCE (Th=27°C)



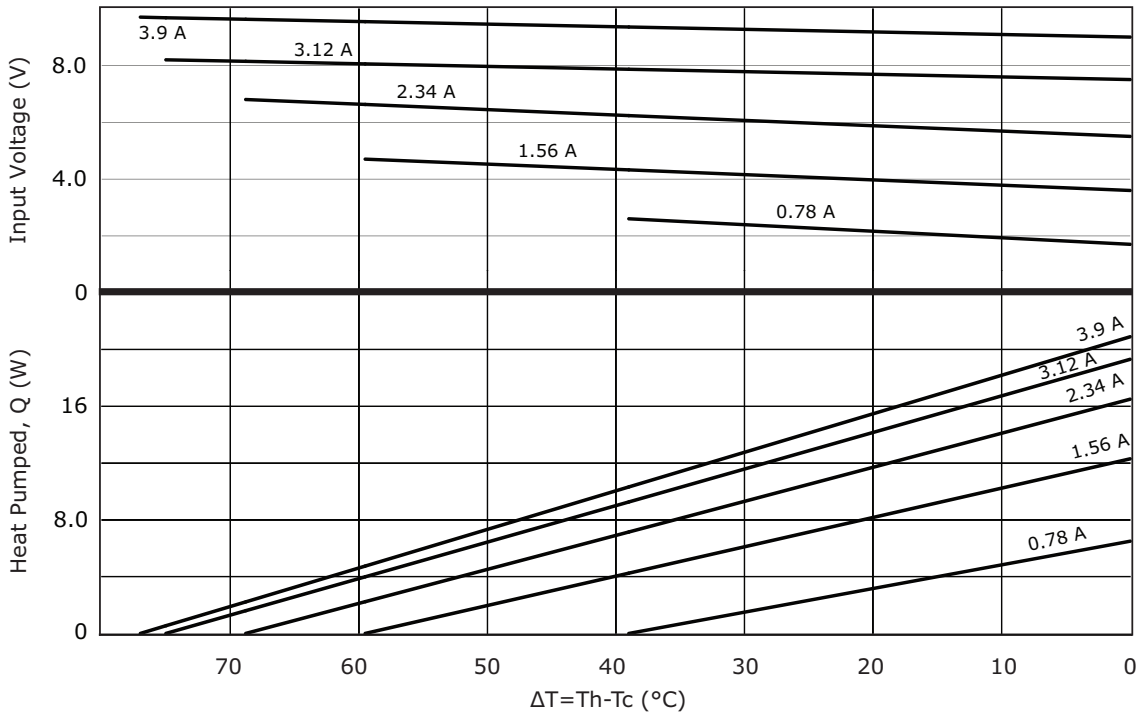
### CP39136H PERFORMANCE (Th=50°C)



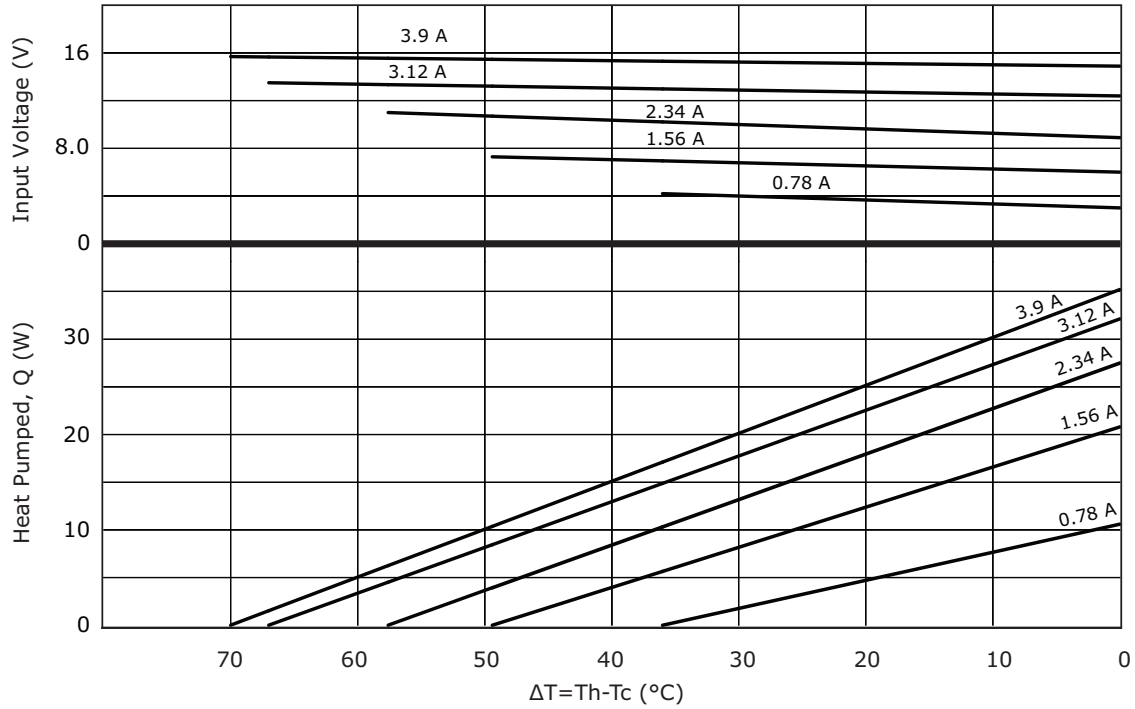
### CP39236H PERFORMANCE (Th=27°C)



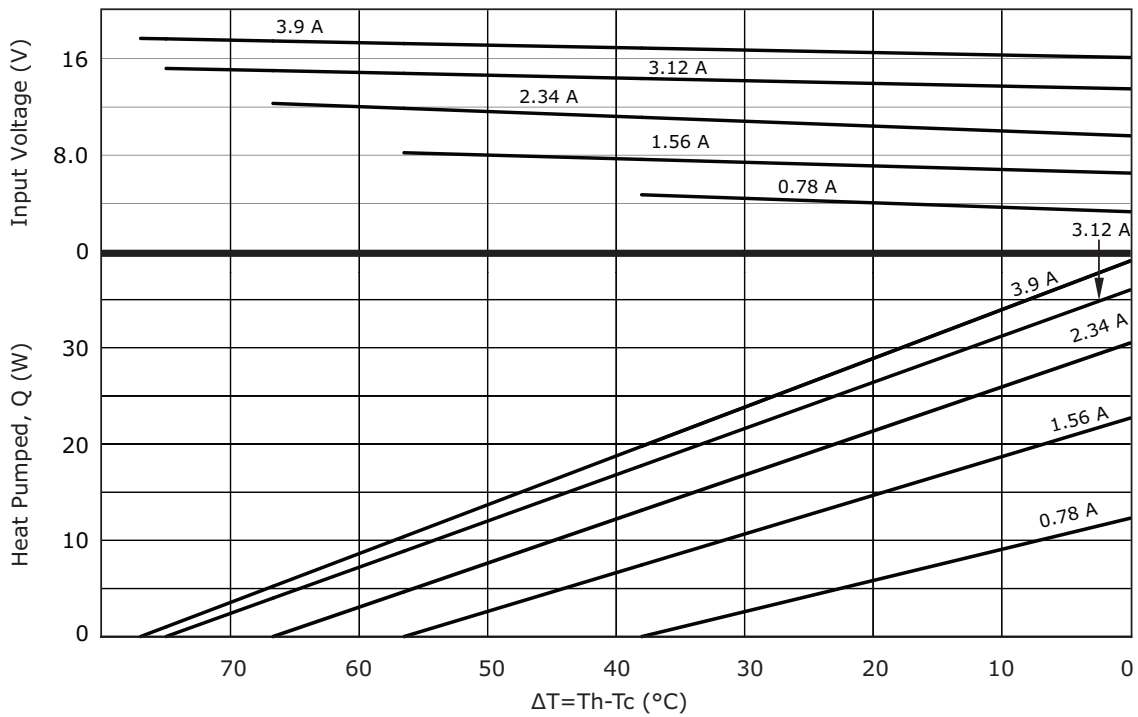
### CP39236H PERFORMANCE (Th=50°C)



### CP393365H PERFORMANCE (Th=27°C)



### CP393365H PERFORMANCE (Th=50°C)



## REVISION HISTORY

| rev. | description       | date       |
|------|-------------------|------------|
| 1.0  | initial release   | 09/08/2016 |
| 1.01 | updated datasheet | 09/25/2017 |

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



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CUI offers a one (1) year limited warranty. Complete warranty information is listed on our website.

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