



SERIES: CP14-M | DESCRIPTION: PELTIER MODULE

FEATURES

- micro size [less than 10 x 10 mm]
- wide  $\Delta T$  max
- $Q_{max}$  up to 1.7 W
- Au plating available, suitable for soldering
- 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>$Q_{max}$ <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>[ $^\circ\text{C}$ ] | $T_h=50^\circ\text{C}$<br>[ $^\circ\text{C}$ ] |
| CP147660-195               | 2.0                                           | 1.4                                         | 1.17                                                                | 1.6                              | 1.7                           | 70                                             | 77                                             |
| CP147660-236P <sup>6</sup> | 2.0                                           | 1.4                                         | 1.17                                                                | 1.6                              | 1.7                           | 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. Gold plating on both sides.

SOLDERABILITY<sup>7</sup>

| parameter           | conditions/description     | min | typ | max | units            |
|---------------------|----------------------------|-----|-----|-----|------------------|
| soldering to plates | soldering iron temperature |     |     | 150 | $^\circ\text{C}$ |

Note: 7. Only for gold plated models. The solder that holds the peltier together melts at  $235^\circ\text{C}$ . Caution must taken to not leave the soldering iron in contact with the surface too long, or damage to the peltier could occur.

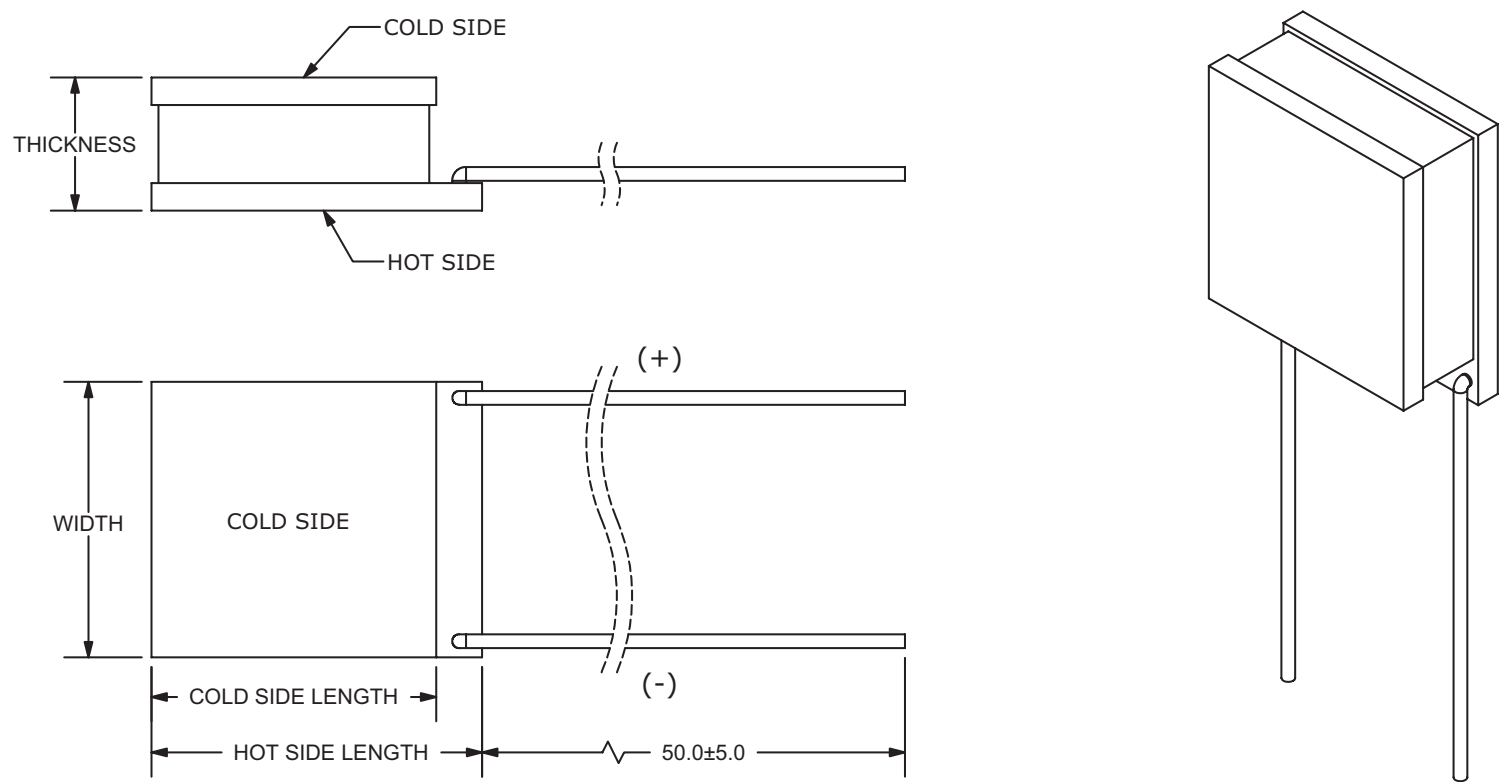
SPECIFICATIONS

| parameter                  | conditions/description                  | min | typ | max | units |
|----------------------------|-----------------------------------------|-----|-----|-----|-------|
| solder melting temperature | connection between thermoelectric pairs | 235 |     |     | °C    |
| assembly compression       |                                         |     |     | 0.8 | MPa   |
| RoHS                       | yes                                     |     |     |     |       |

MECHANICAL DRAWING

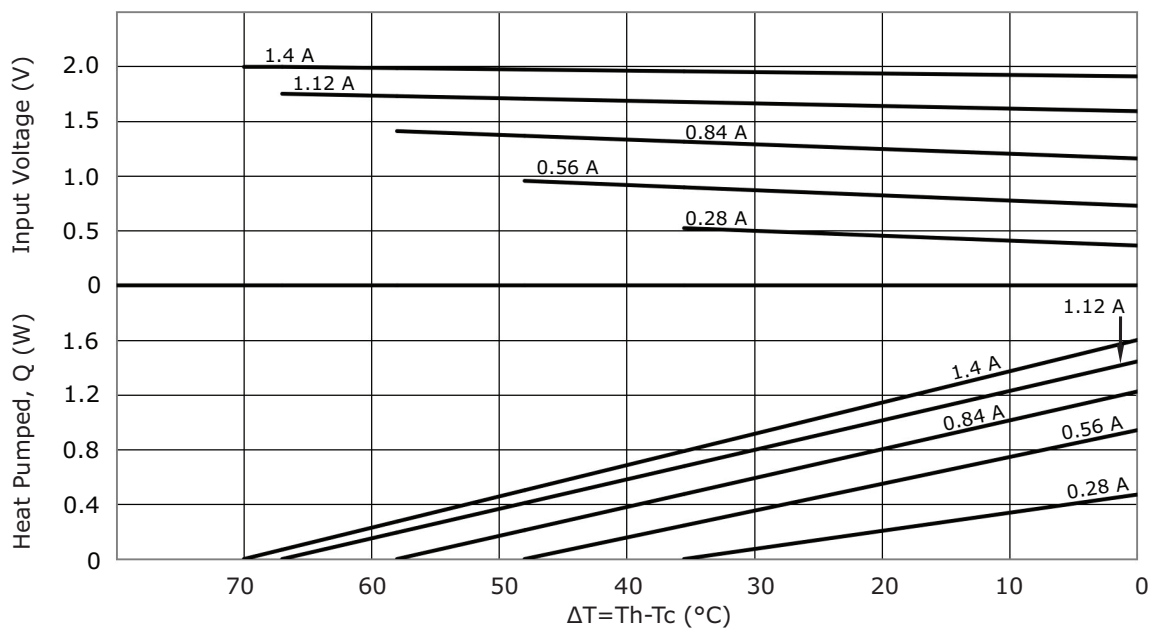
units: mm

|                 | MATERIAL                           | PLATING |
|-----------------|------------------------------------|---------|
| ceramic plate   | 96% AL <sub>2</sub> O <sub>3</sub> |         |
| wire leads      | Ø0.25-0.3 mm<br>annealed copper    | tin     |
| sealer          | no sealing                         |         |
| ceramic surface | Au plating on select models        |         |

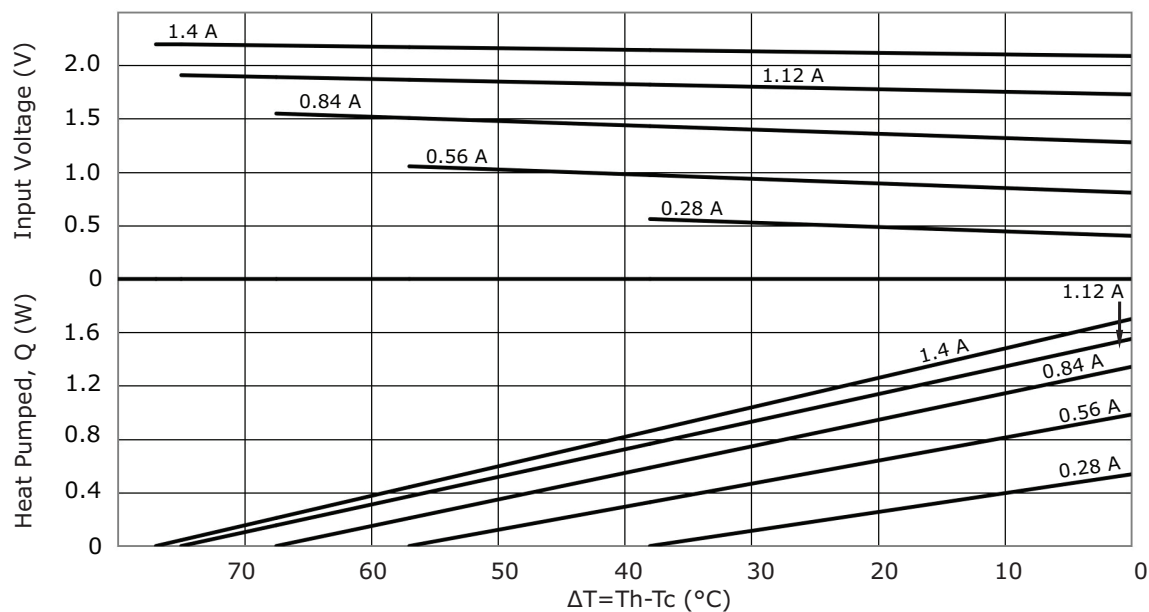


| MODEL NO.     | HOT SIDE LENGTH [mm] | COLD SIDE LENGTH [mm] | WIDTH [mm] | THICKNESS [mm] | GOLD PLATING HOT/ COLD SIDES |
|---------------|----------------------|-----------------------|------------|----------------|------------------------------|
| CP147660-195  | 7.6±0.3              | 6.0 ±0.3              | 6.0 ±0.3   | 1.95 ±0.15     | NO                           |
| CP147660-236P | 7.6±0.3              | 6.0 ±0.3              | 6.0 ±0.3   | 2.36 ±0.15     | YES                          |

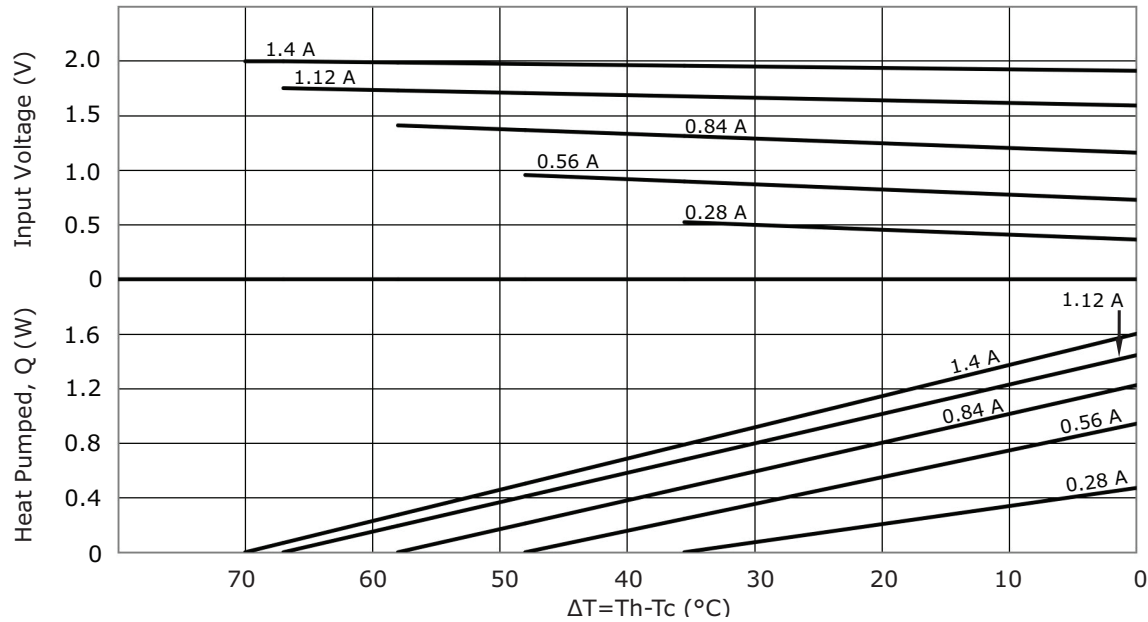
## CP147660-195 PERFORMANCE (Th=27°C)



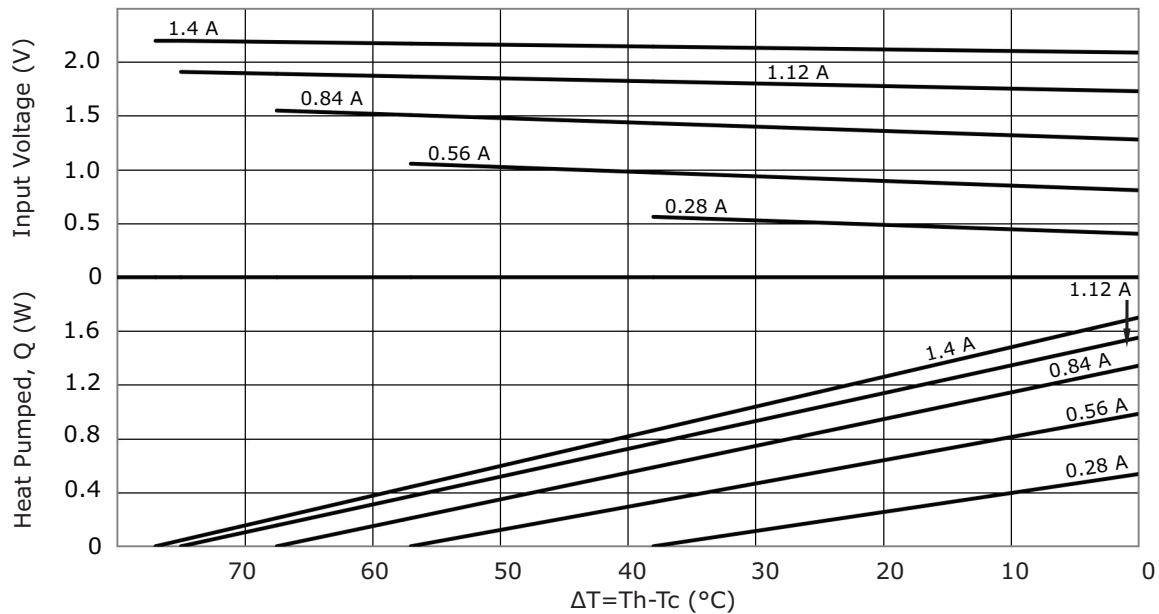
## CP147660-195 PERFORMANCE (Th=50°C)



## CP147660-236P PERFORMANCE (Th=27°C)



## CP147660-236P PERFORMANCE (Th=50°C)



REVISION HISTORY

| rev. | description                       | date       |
|------|-----------------------------------|------------|
| 1.0  | initial release                   | 07/08/2020 |
| 1.01 | logo, datasheet style update      | 08/05/2022 |
| 1.02 | 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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