



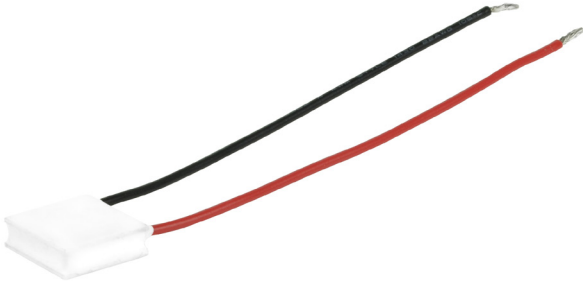
SERIES: CP20

|

DESCRIPTION: PELTIER MODULE

FEATURES

- solid state device
- small and lightweight
- precise temperature control
- quiet operation



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>[Ω±10%] | output<br>Qmax <sup>4</sup> |                             | output<br>ΔTmax <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] |
| CP20151 | 3.8                                           | 2                                           | 1.6                                                   | 3.7                         | 4.0                         | 66                           | 72                           |
| CP20251 | 8.6                                           | 2                                           | 3.5                                                   | 8.5                         | 9.4                         | 66                           | 72                           |
| CP20351 | 15.4                                          | 2                                           | 6.7                                                   | 15.2                        | 16.9                        | 66                           | 72                           |

Notes:

1. Maximum voltage at ΔT max and T<sub>h</sub>=27°C

2. Maximum current to achieve ΔT 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 ΔT=0°C

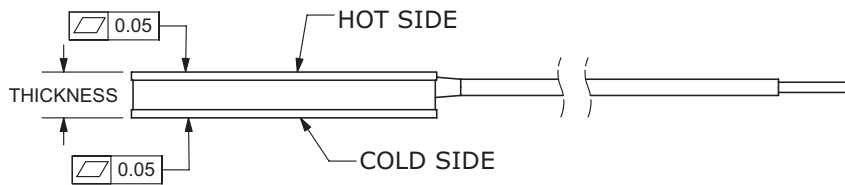
5. Maximum temperature difference occurs at I<sub>max</sub>, V<sub>max</sub>, and Q=0W (ΔT max measured in a vacuum at 1.3 Pa)

## SPECIFICATIONS

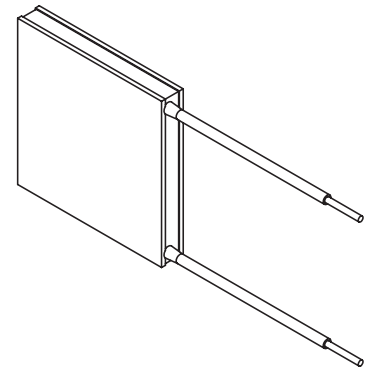
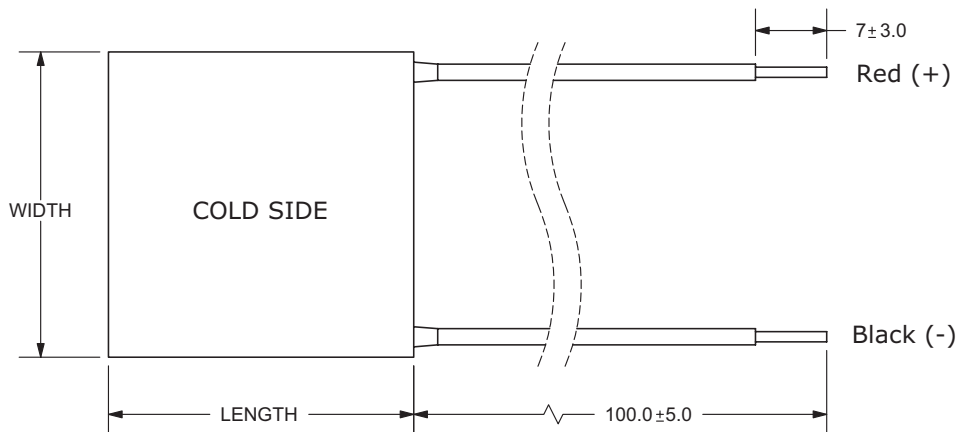
| parameter                  | conditions/description                  | min | typ | max | units |
|----------------------------|-----------------------------------------|-----|-----|-----|-------|
| solder melting temperature | connection between thermoelectric pairs | 235 |     |     | °C    |
| assembly compression       |                                         |     |     | 1   | MPa   |
| hot side plate             |                                         |     |     | 80  | °C    |
| RoHS                       | yes                                     |     |     |     |       |

# MECHANICAL DRAWING

units: mm

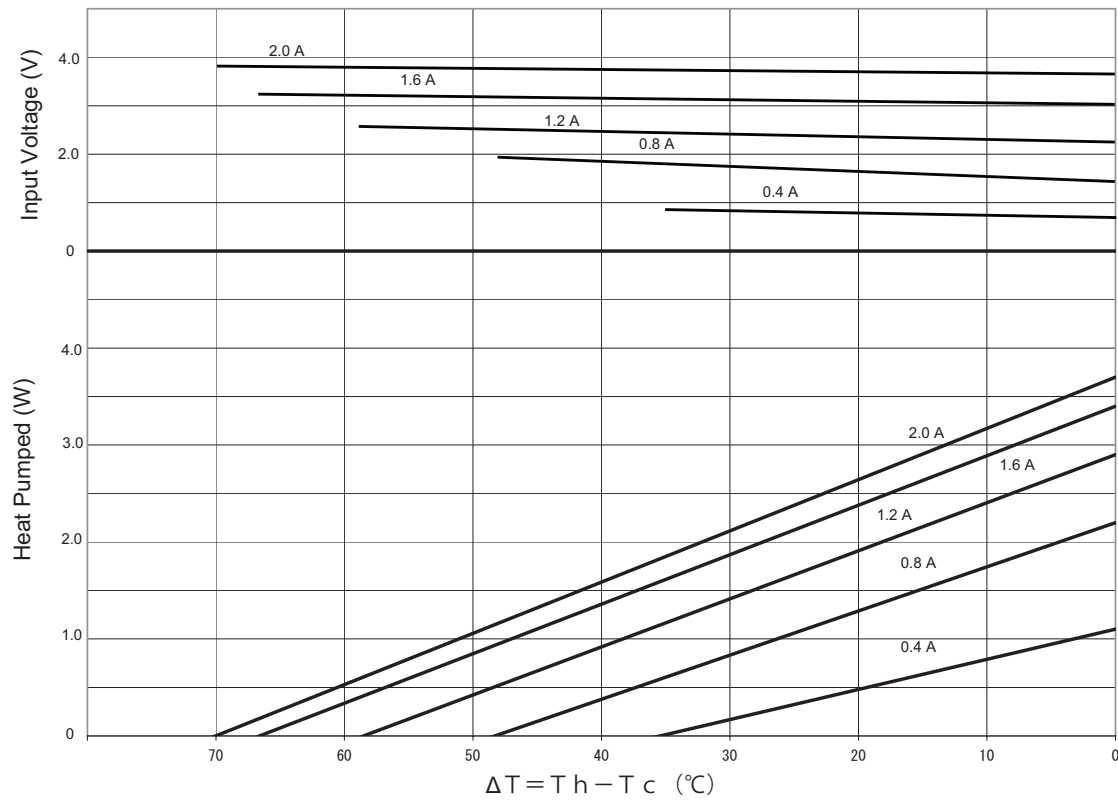


|               | MATERIAL                                                  | PLATING |
|---------------|-----------------------------------------------------------|---------|
| ceramic plate | 96% $\text{Al}_2\text{O}_3$                               |         |
| wire leads    | 22 AWG                                                    | 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                    |         |

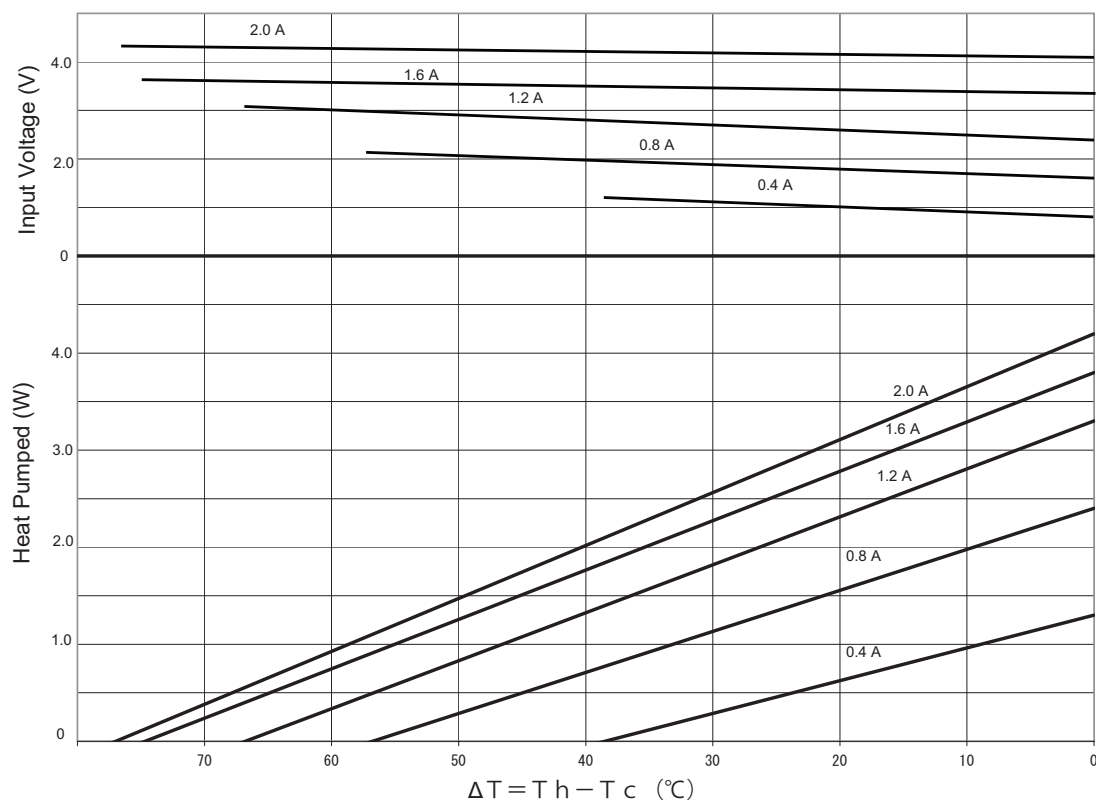


| MODEL NO. | LENGTH<br>[mm] | WIDTH<br>[mm] | THICKNESS<br>[mm] |
|-----------|----------------|---------------|-------------------|
| CP20151   | 15 ±0.3        | 15 ±0.3       | 5.02 ±0.1         |
| CP20251   | 20 ±0.3        | 20 ±0.3       | 5.02 ±0.1         |
| CP20351   | 30 ±0.3        | 30 ±0.3       | 5.02 ±0.1         |

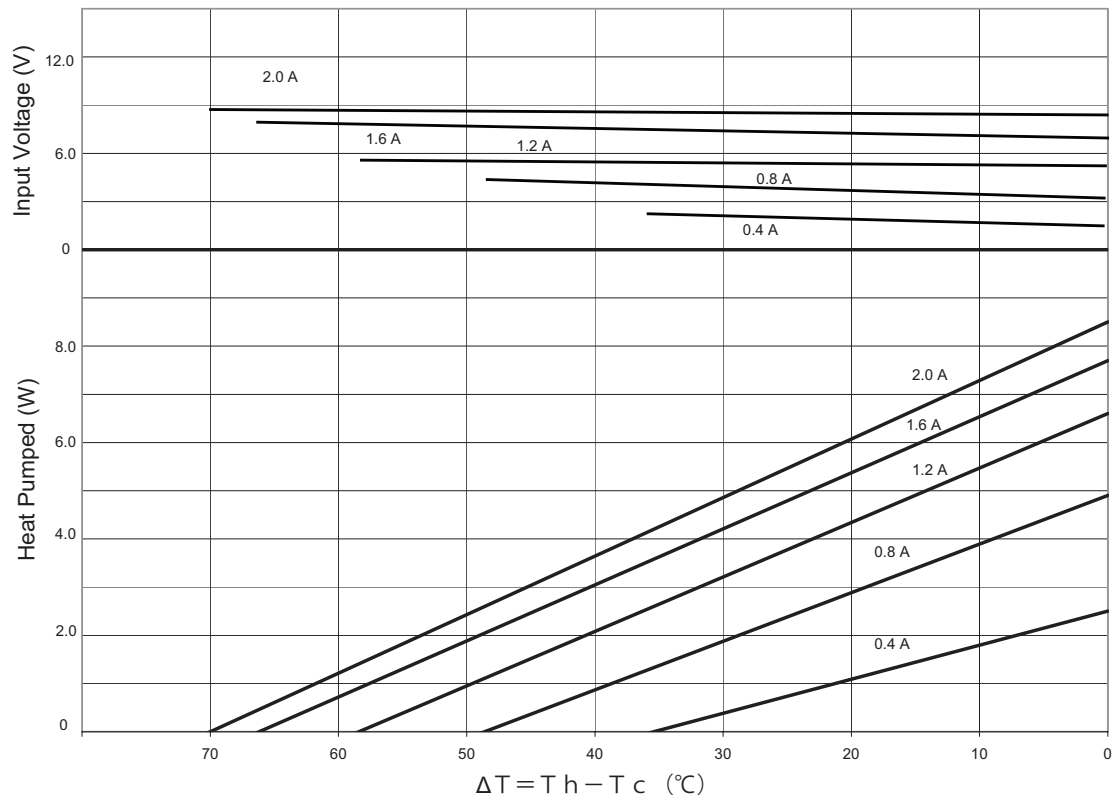
## CP20151 PERFORMANCE (Th=27°C)



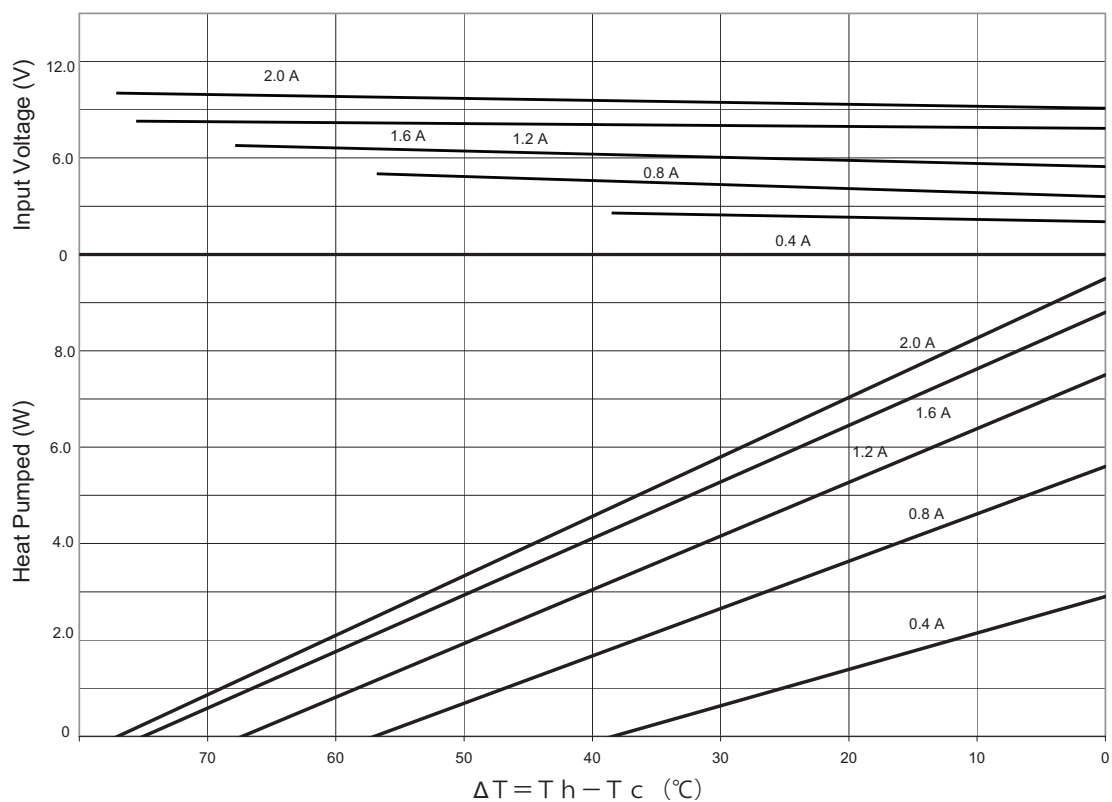
## CP20151 PERFORMANCE (Th=50°C)



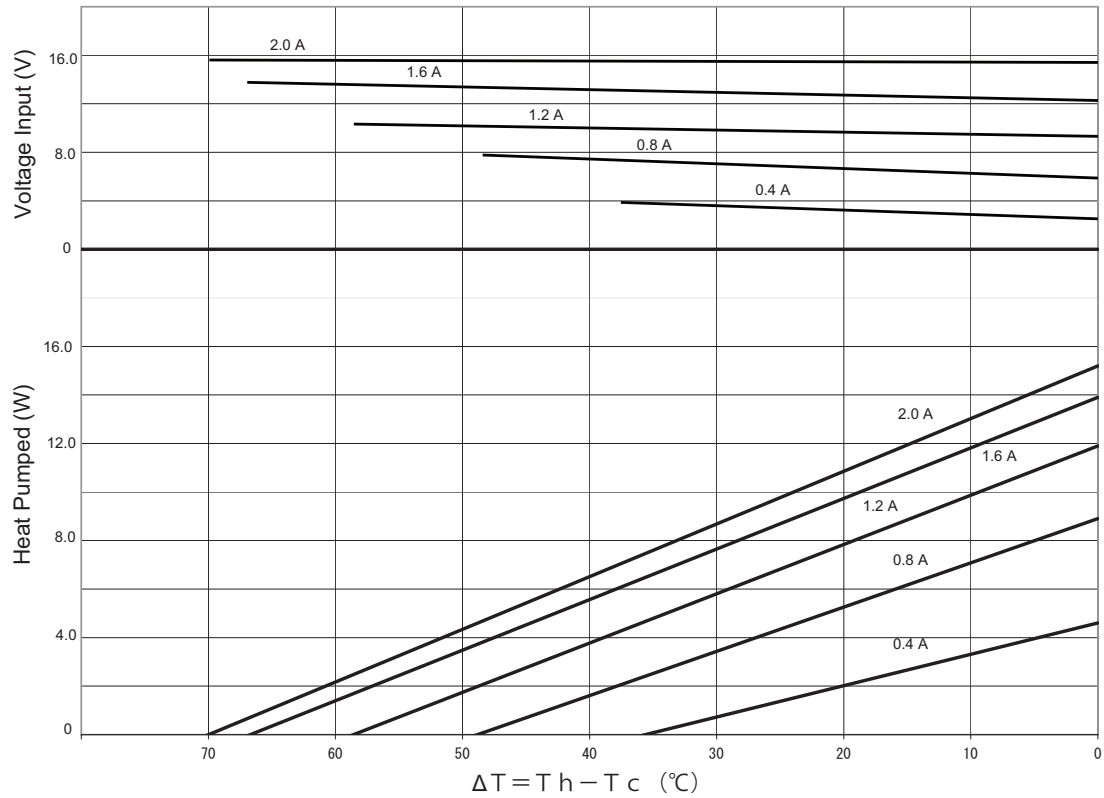
## CP20251 PERFORMANCE (Th=27°C)



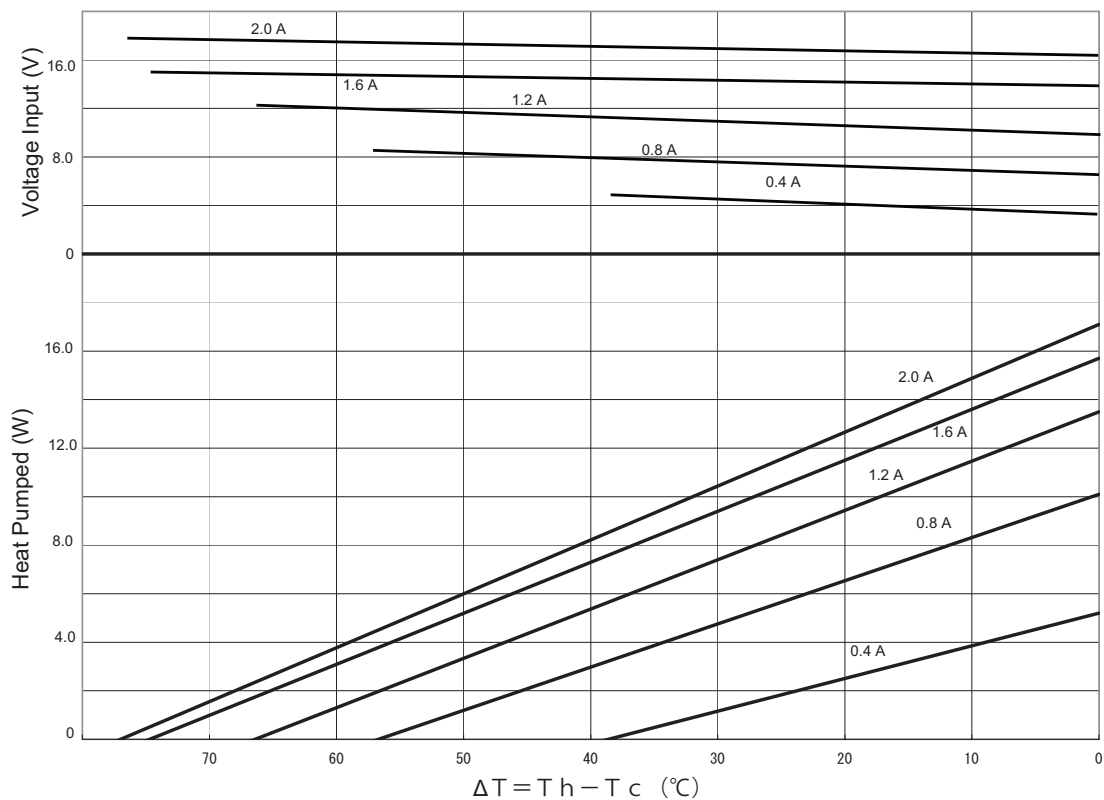
## CP20251 PERFORMANCE (Th=50°C)



## CP20351 PERFORMANCE (Th=27°C)



## CP20351 PERFORMANCE (Th=50°C)



REVISION HISTORY

| rev. | description                       | date       |
|------|-----------------------------------|------------|
| 1.0  | initial release                   | 09/03/2009 |
| 1.01 | applied new template              | 05/07/2012 |
| 1.02 | changed thickness of all models   | 09/20/2018 |
| 1.03 | brand update                      | 10/28/2019 |
| 1.04 | logo, datasheet style update      | 08/05/2022 |
| 1.05 | 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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