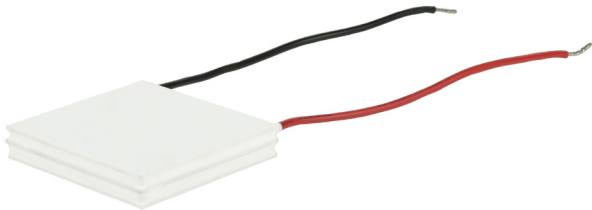




SERIES: CP85-2 | DESCRIPTION: PELTIER MODULE

FEATURES

- solid state device
- 2-stage cooler
- precise temperature control
- quiet operation

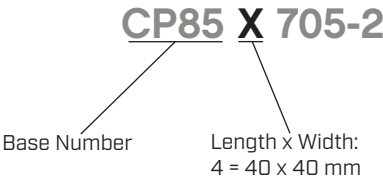


MODEL

|            | input<br>voltage <sup>1</sup><br>max<br>[Vdc] | input<br>current <sup>2</sup><br>max<br>[A] | $T_h=27^{\circ}\text{C}$<br>[W] | output<br>$Q_{\text{max}}^3$<br>$T_h=50^{\circ}\text{C}$<br>[W] | $T_h=27^{\circ}\text{C}$<br>[°C] | output<br>$\Delta T_{\text{max}}^4$<br>$T_h=50^{\circ}\text{C}$<br>[°C] |
|------------|-----------------------------------------------|---------------------------------------------|---------------------------------|-----------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------|
| CP854705-2 | 16.1                                          | 8.5                                         | 51.6                            | 58                                                              | 85                               | 95                                                                      |

Notes: 1. Maximum voltage at  $\Delta T_{\text{max}}$  and  $T_h=27^{\circ}\text{C}$   
2. Maximum current to achieve  $\Delta T_{\text{max}}$   
3. Maximum heat absorbed at cold side occurs at  $I_{\text{max}}$ ,  $V_{\text{max}}$ , and  $\Delta T=0^{\circ}\text{C}$   
4. Maximum temperature difference occurs at  $I_{\text{max}}$ ,  $V_{\text{max}}$ , and  $Q=0\text{W}$  ( $\Delta T_{\text{max}}$  measured in a vacuum at 1.3 Pa)

PART NUMBER KEY



SPECIFICATIONS

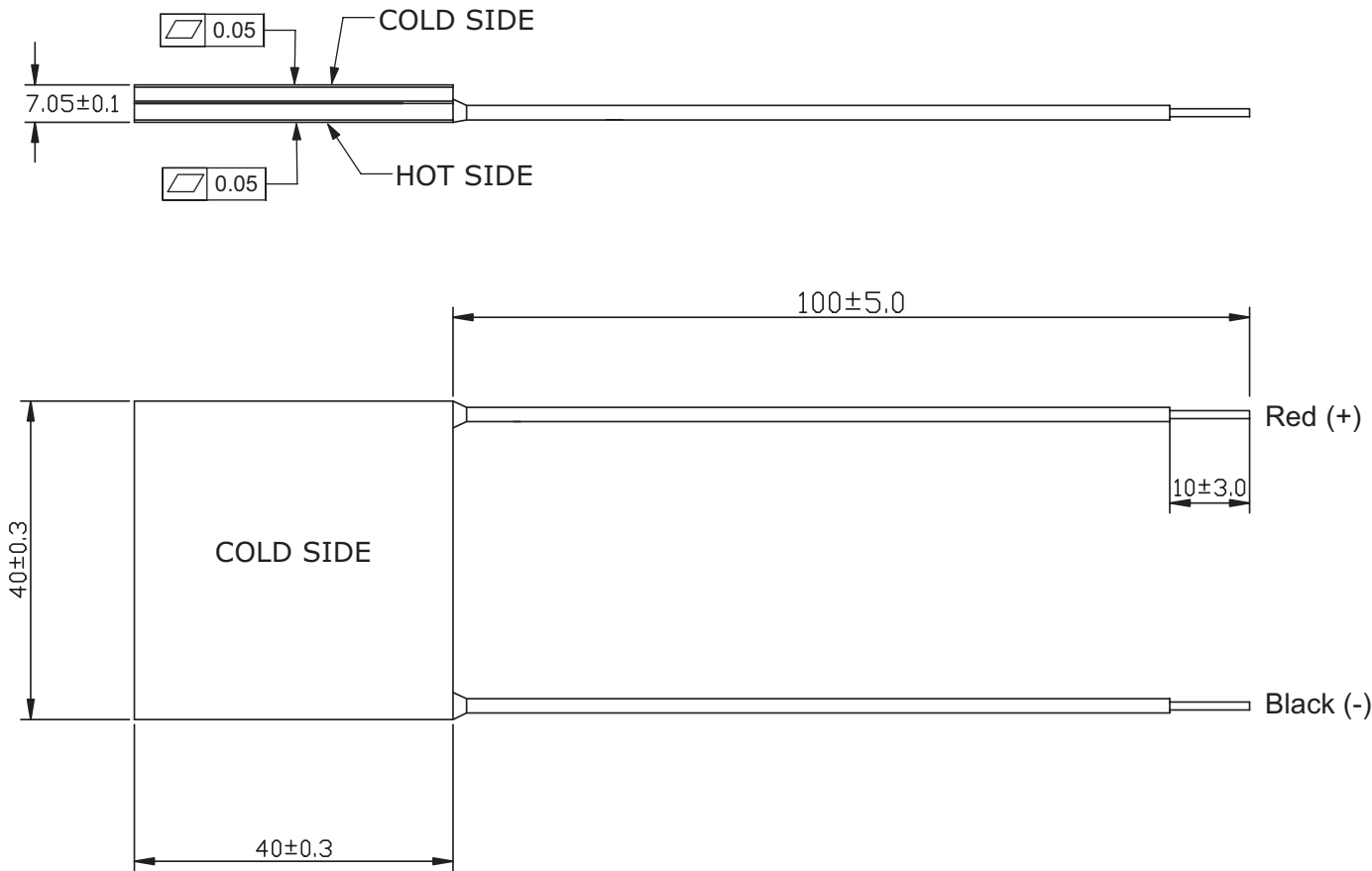
| parameter                        | conditions/description                  | min   | typ  | max   | units |
|----------------------------------|-----------------------------------------|-------|------|-------|-------|
| internal resistance <sup>1</sup> |                                         | 1.485 | 1.65 | 1.815 | 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

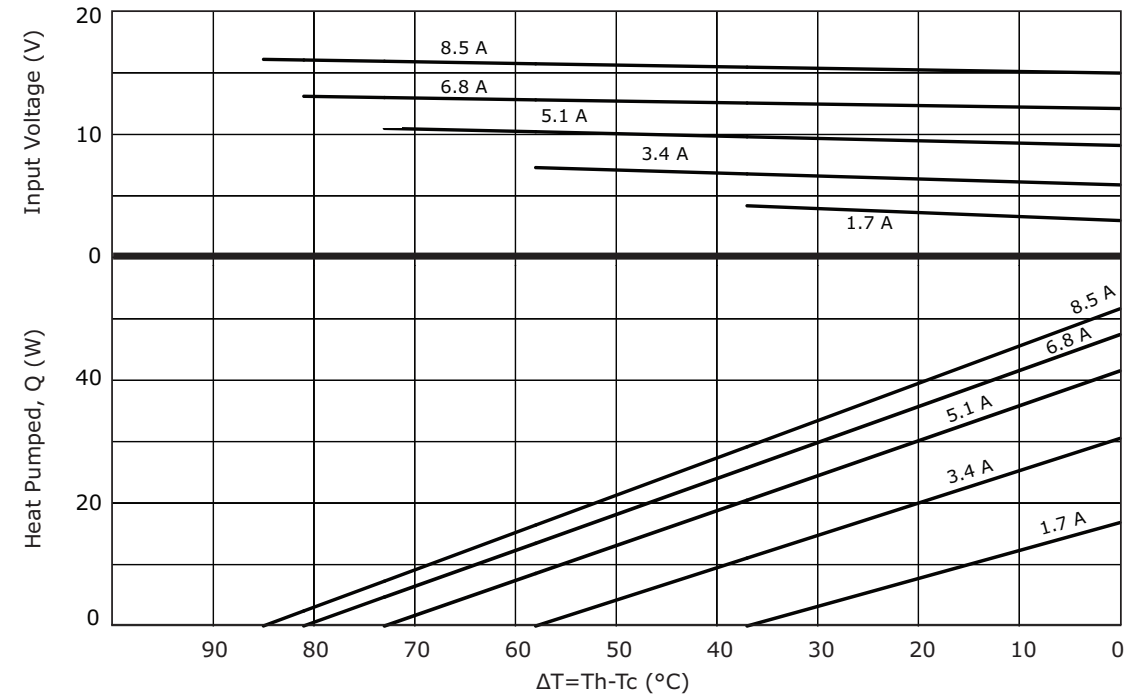
MECHANICAL DRAWING

units: mm

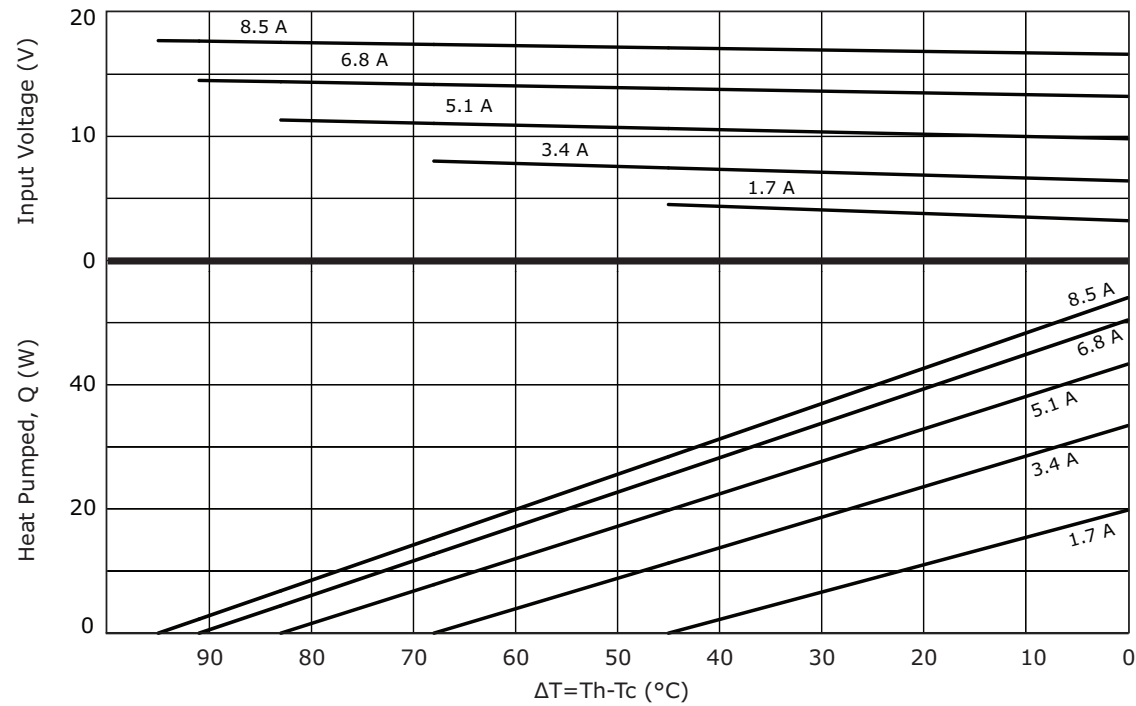
|               | MATERIAL                                                  | PLATING |
|---------------|-----------------------------------------------------------|---------|
| ceramic plate | 96% AL <sub>2</sub> O <sub>3</sub>                        |         |
| wire leads    | 20 AWG                                                    | tin     |
| sealer        | silicon tubber 703 RTV (between cold and hot side plates) |         |
| joint cover   | scilicon rubber 703 RTV                                   |         |
| marking       | P/N & S/N printed on cold side surface                    |         |



**PERFORMANCE (Th=27°C)**



**PERFORMANCE (Th=50°C)**



REVISION HISTORY

| rev. | description                       | date       |
|------|-----------------------------------|------------|
| 1.0  | initial release                   | 09/12/2016 |
| 1.01 | brand update                      | 10/30/2019 |
| 1.02 | updated solder melting point      | 08/24/2021 |
| 1.03 | logo, datasheet style update      | 08/05/2022 |
| 1.04 | 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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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.

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