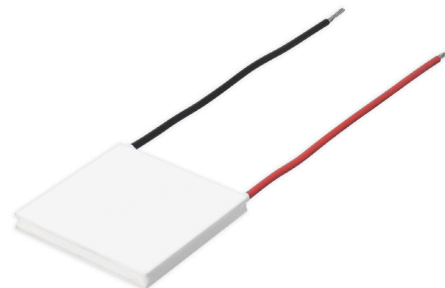


SERIES: CP140 | **DESCRIPTION:** PELTIER MODULE

FEATURES

- arcTEC™ structure
- enhanced reliability for high thermal cycling
- superior thermal performance
- silicon sealed
- wide ΔT_{max}
- precise temperature control
- solid state construction


MODEL

| | input voltage ¹ max [Vdc] | input current ² max [A] | internal resistance ³ typ [$\Omega \pm 10\%$] | output Qmax ⁴ | | output ΔT_{max} ⁵ | |
|-------------|---|---|---|-----------------------------|-----------------------------|---|------------------------------|
| | | | | T _h =27°C [W] | T _h =50°C [W] | T _h =27°C [°C] | T _h =50°C [°C] |
| CP144044 | 8.6 | 14 | 0.49 | 67 | 73 | 70 | 77 |
| CP144745325 | 19.5 | 14 | 1.08 | 157 | 172 | 70 | 77 |

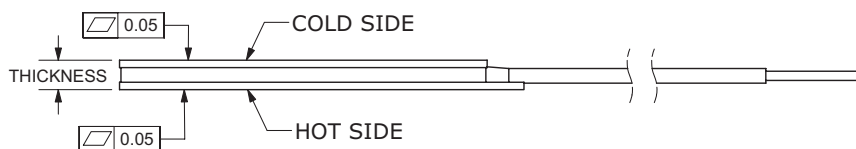
Notes: 1. Maximum voltage at ΔT_{max} and T_h=27°C
 2. Maximum current to achieve ΔT_{max}
 3. Measured by AC 4-terminal method at 25°C
 4. Maximum heat absorbed at cold side occurs at I_{max}, V_{max}, and $\Delta T=0^\circ\text{C}$
 5. Maximum temperature difference occurs at I_{max}, V_{max}, and Q=0W (ΔT_{max} measured in a vacuum at 1.3 Pa)

SPECIFICATIONS

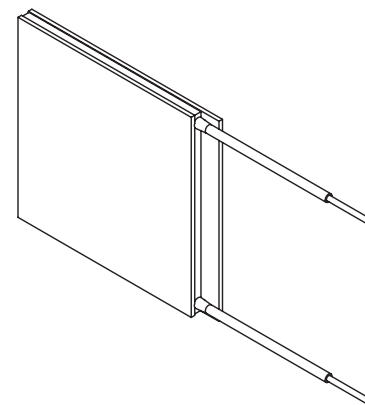
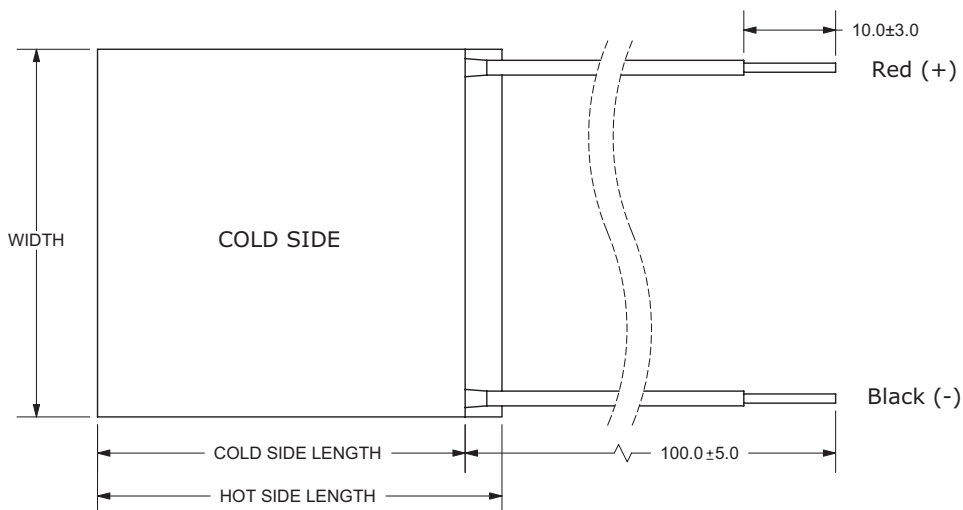
| parameter | conditions/description | min | typ | max | units |
|----------------------------|---|-----|-----|-----|-------|
| solder melting temperature | connection between thermoelectric pairs | 235 | | | °C |
| assembly compression | | | | 1 | MPa |
| RoHS | yes | | | | |

MECHANICAL DRAWING

units: mm

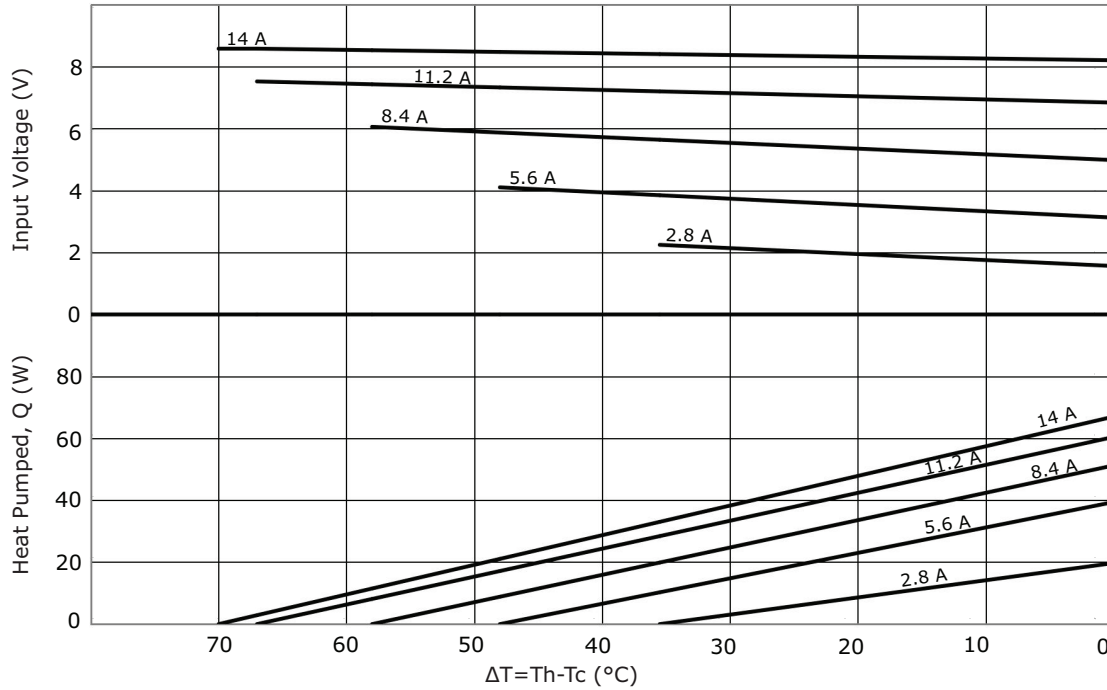


| | MATERIAL | PLATING |
|---------------|---|---------|
| ceramic plate | 96% Al_2O_3 | |
| wire leads | 18 AWG | tin |
| sealer | silicon rubber 703 RTV (between cold and hot side plates) | |
| joint cover | silicon rubber 703 RTV | |
| marking | P/N & S/N printed on cold side surface | |

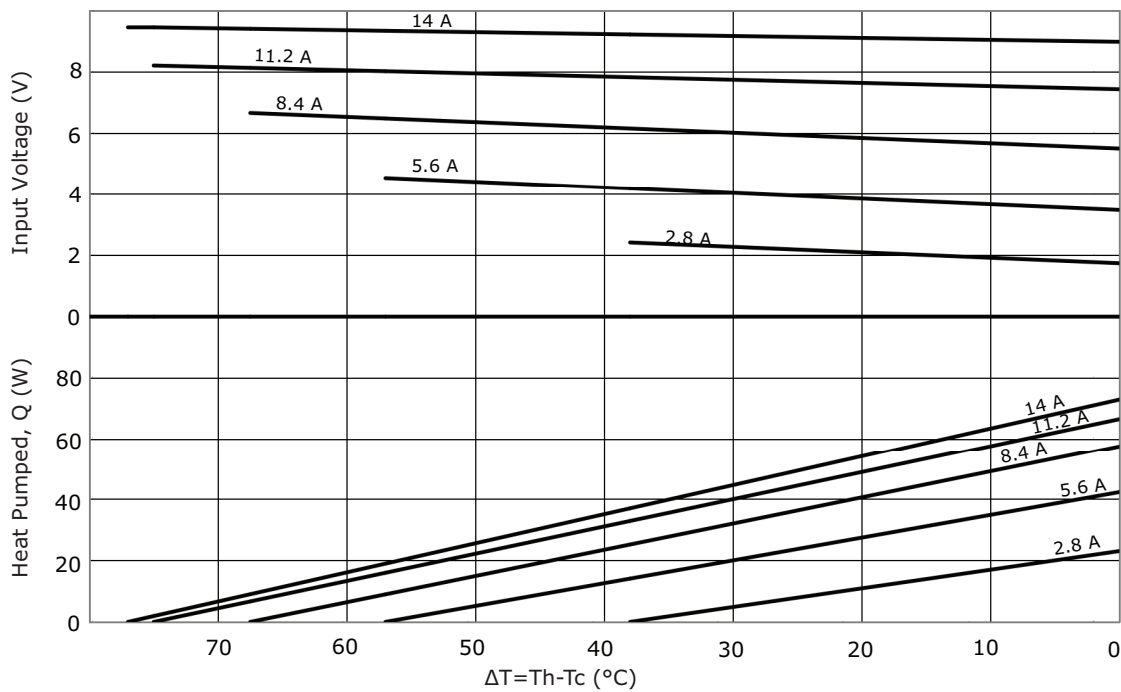


| MODEL NO. | HOT SIDE LENGTH [mm] | COLD SIDE LENGTH [mm] | WIDTH [mm] | THICKNESS [mm] |
|-------------|----------------------|-----------------------|------------|----------------|
| CP144044 | 40 ± 0.3 | 40 ± 0.3 | 40 ± 0.3 | 4.4 ± 0.1 |
| CP144745325 | 47 ± 0.5 | 44.8 ± 0.5 | 44.8 ± 0.3 | 3.25 ± 0.025 |

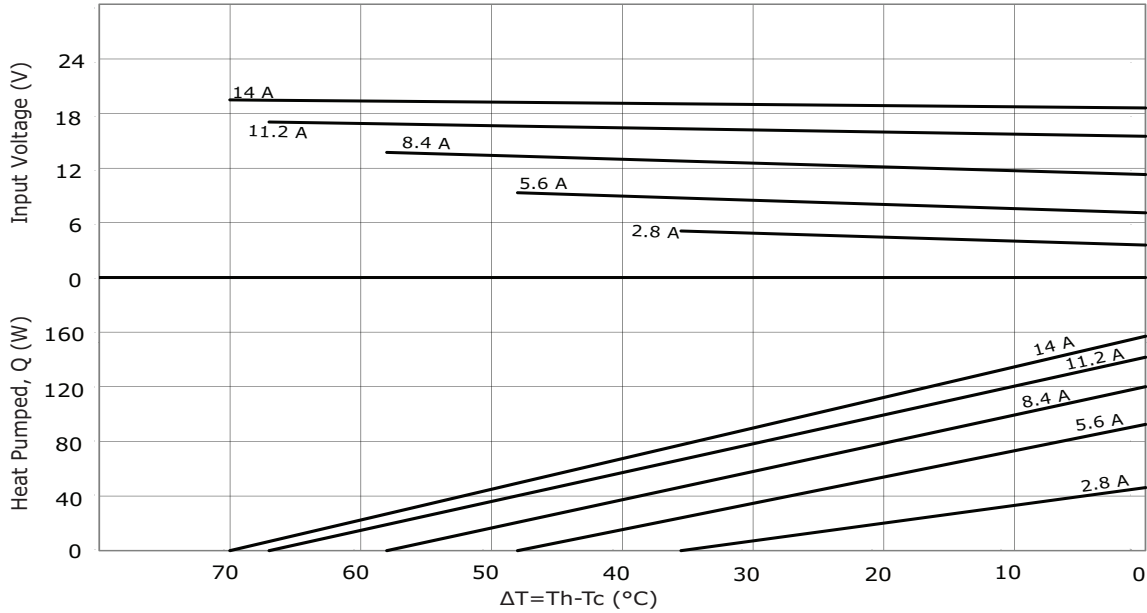
CP144044 PERFORMANCE (Th=27°C)



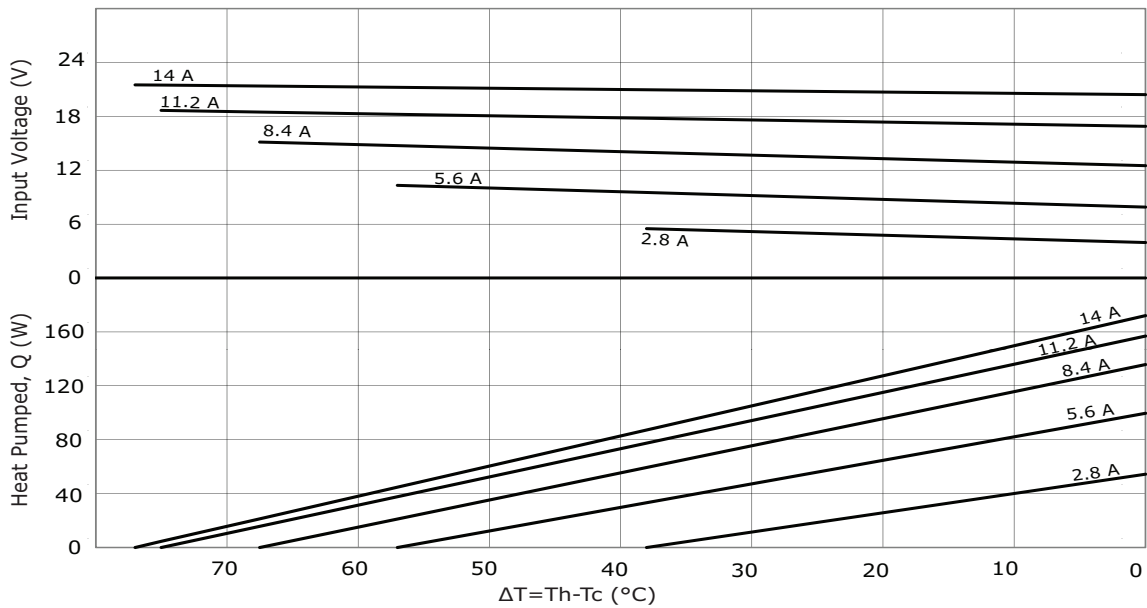
CP144044 PERFORMANCE (Th=50°C)



CP144745325 PERFORMANCE (Th=27°C)



CP144745325 PERFORMANCE (Th=50°C)



REVISION HISTORY

| rev. | description | date |
|------|------------------------------|------------|
| 1.0 | initial release | 10/17/2019 |
| 1.01 | added model CP144745325 | 11/10/2020 |
| 1.02 | logo, datasheet style update | 08/05/2022 |

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



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

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