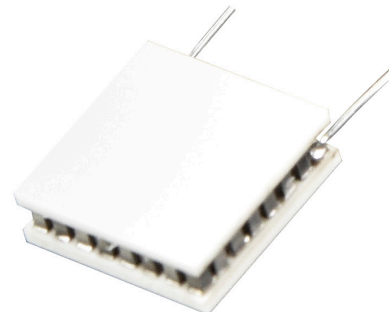


SERIES: CP18-M | DESCRIPTION: PELTIER MODULE

FEATURES

- micro size (less than 10 x 10 mm)
- wide ΔT max
- Q_{max} of 4.2 W
- Au plating available, suitable for soldering
- precise temperature control
- solid state construction



MODEL

| MODEL | input voltage ¹ max (Vdc) | input current ² max (A) | internal resistance ³ typ ($\Omega \pm 10\%$) | output Q_{max} ⁴ | | output ΔT_{max} ⁵ | |
|--------------------------|--|--|--|---------------------------------|---------------------------------|--|--|
| | | | | $T_h = 27^\circ\text{C}$ (W) | $T_h = 50^\circ\text{C}$ (W) | $T_h = 27^\circ\text{C}$ ($^\circ\text{C}$) | $T_h = 50^\circ\text{C}$ ($^\circ\text{C}$) |
| CP1881-222 | 3.8 | 1.8 | 1.62 | 3.8 | 4.2 | 70 | 77 |
| CP1881-254P ⁶ | 3.8 | 1.8 | 1.62 | 3.8 | 4.2 | 70 | 77 |

- Notes:
1. Maximum voltage at ΔT max and $T_h = 27^\circ\text{C}$
 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 $Q = 0\text{W}$ (ΔT max measured in a vacuum at 1.3 Pa)
 6. Gold plating on both sides.

SOLDERABILITY⁷

| 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°C . Caution must be taken to not leave the soldering iron in contact with the surface too long, or damage to the peltier could occur.

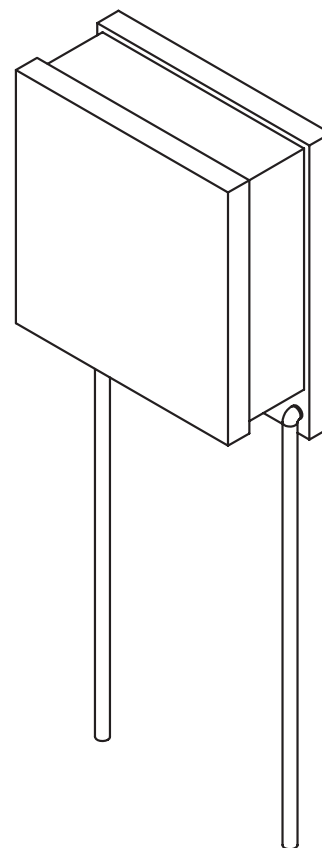
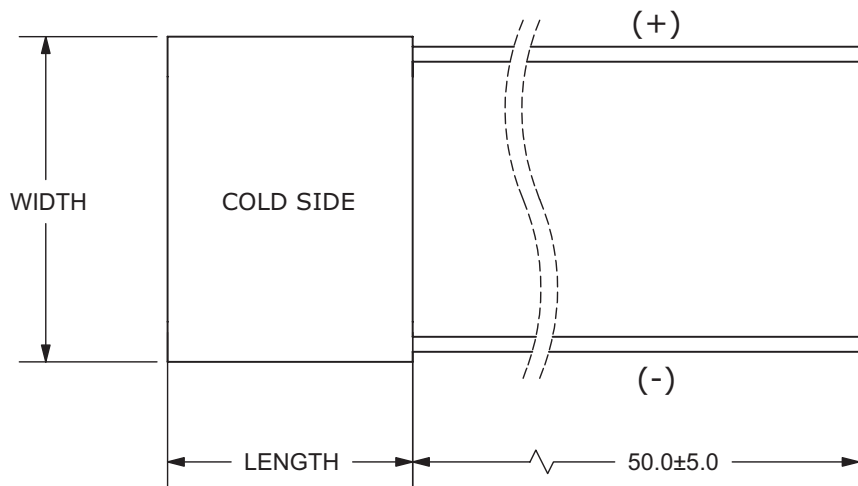
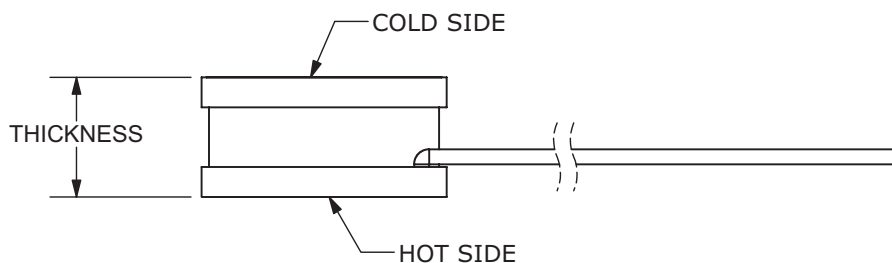
SPECIFICATIONS

| 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

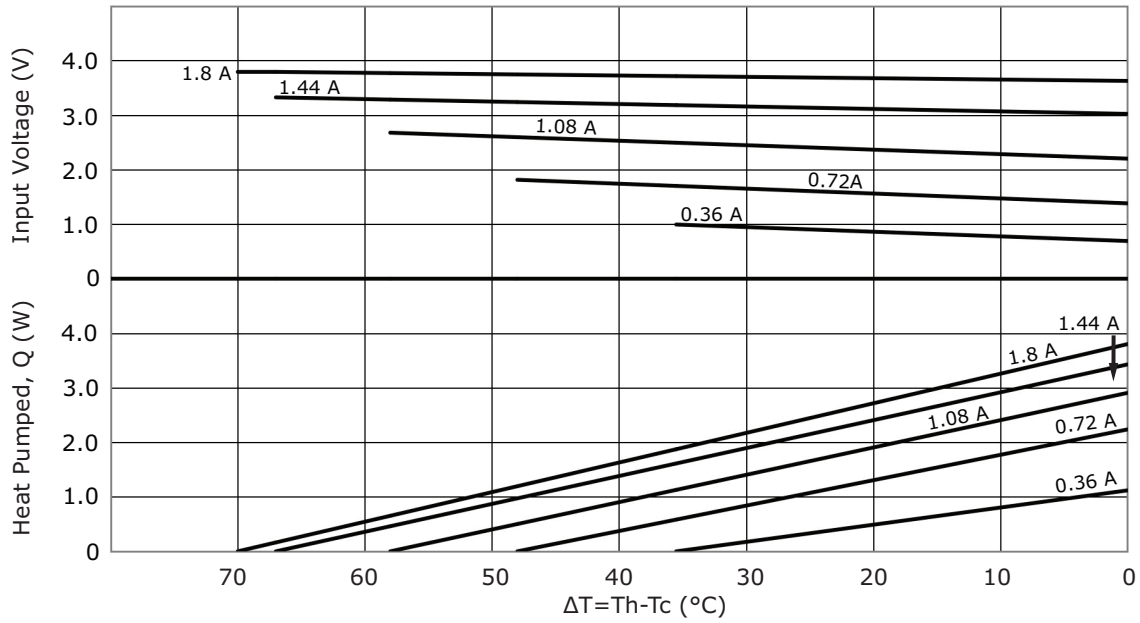
units: mm

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

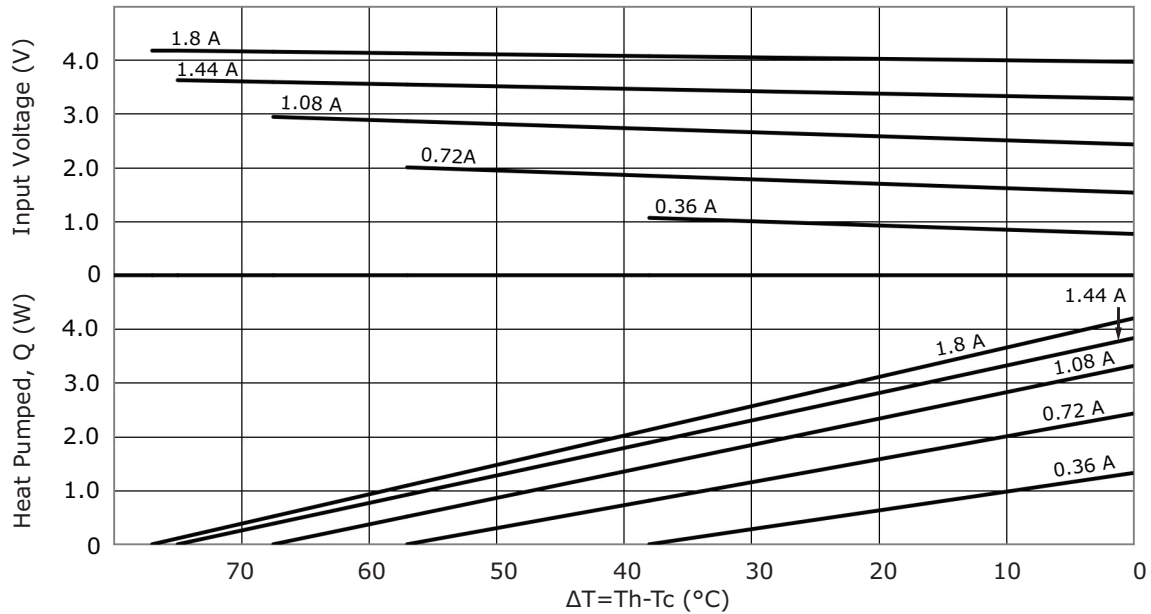


| MODEL NO. | LENGTH (mm) | WIDTH (mm) | THICKNESS (mm) | GOLD PLATING HOT/ COLD SIDES |
|-------------|-------------|------------|----------------|------------------------------|
| CP1881-222 | 8.1 ±0.3 | 8.1 ±0.3 | 2.22 ±0.15 | NO |
| CP1881-254P | 8.1 ±0.3 | 8.1 ±0.3 | 2.54 ±0.15 | YES |

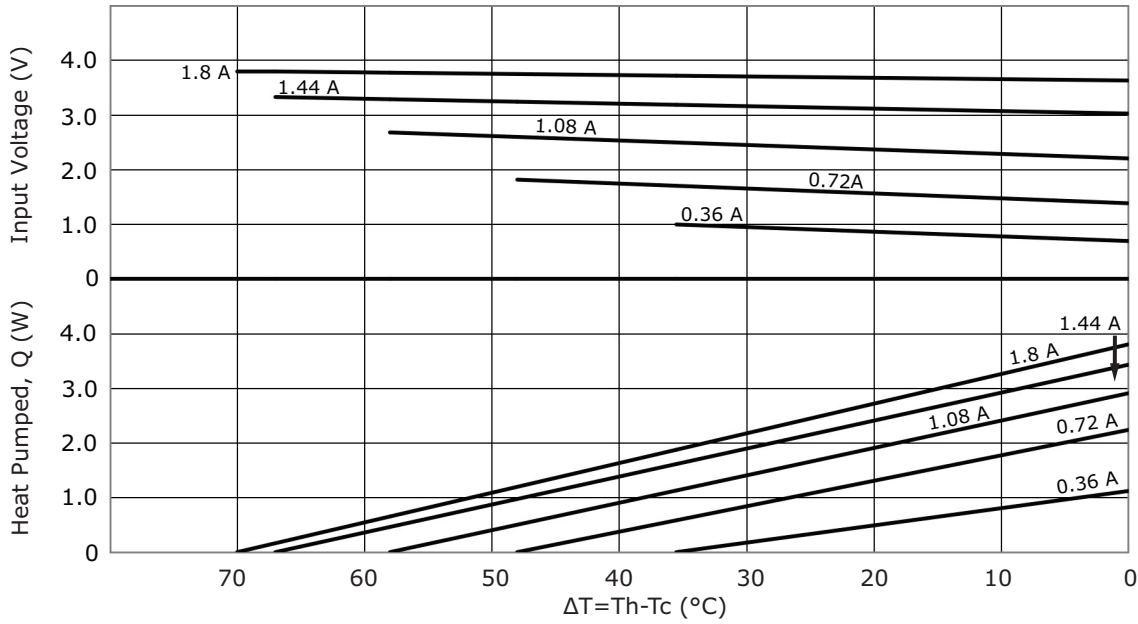
CP1881-222 PERFORMANCE (Th=27°C)



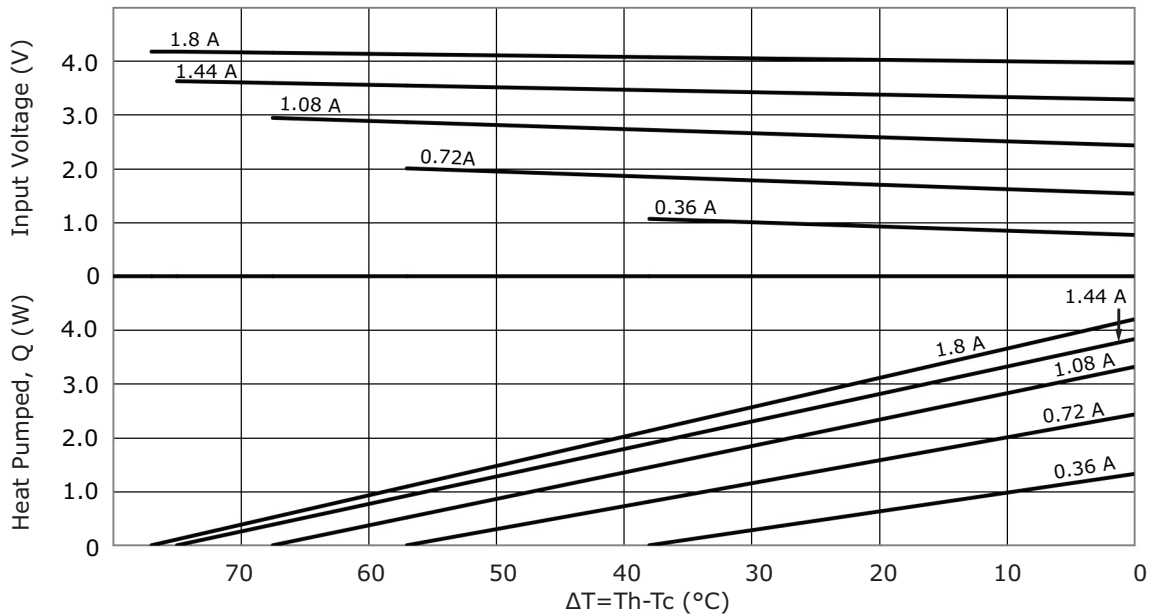
CP1881-222 PERFORMANCE (Th=50°C)



CP1881-254P PERFORMANCE (Th=27°C)



CP1881-254P PERFORMANCE (Th=50°C)



REVISION HISTORY

| rev. | description | date |
|------|-----------------|------------|
| 1.0 | initial release | 07/08/2020 |

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

CUI DEVICES

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