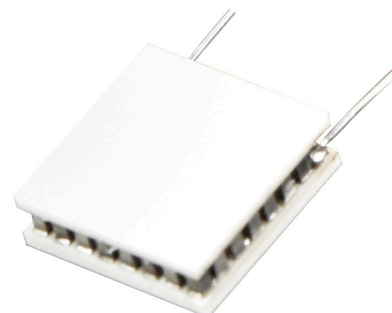


## SERIES: CP18-M | DESCRIPTION: PELTIER MODULE

### FEATURES

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



### MODEL

MODEL	input voltage <sup>1</sup> max (Vdc)	input current <sup>2</sup> max (A)	internal resistance <sup>3</sup> typ ( $\Omega \pm 10\%$ )	output $Q_{max}$ <sup>4</sup>		output $\Delta T_{max}$ <sup>5</sup>	
				$T_h = 27^\circ\text{C}$ (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 <sup>6</sup>	3.8	1.8	1.62	3.8	4.2	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	$^\circ\text{C}$

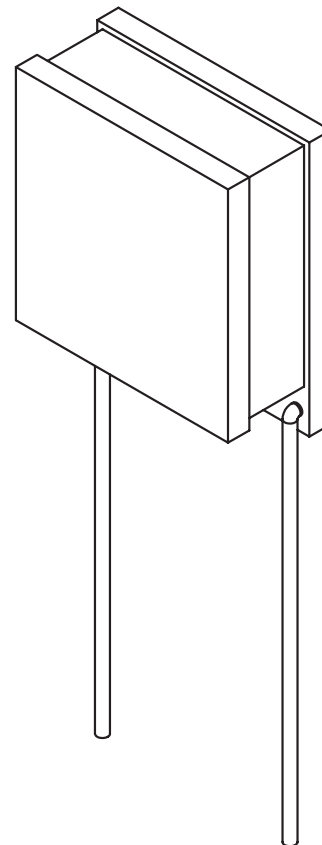
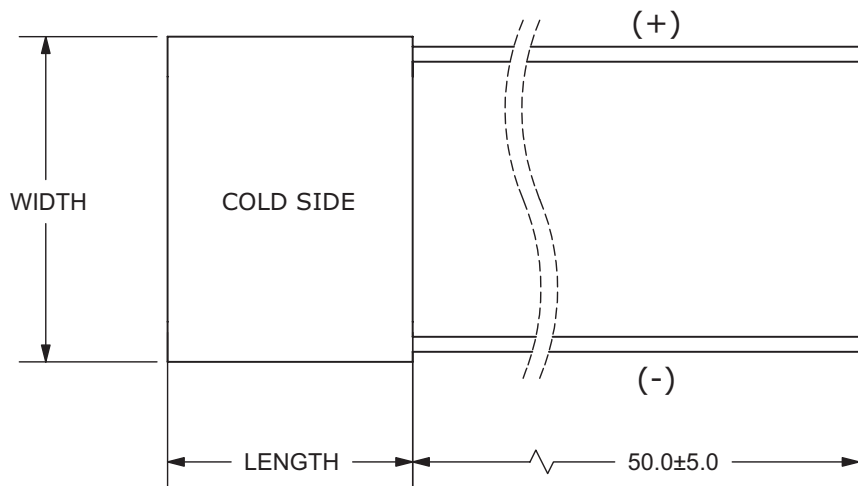
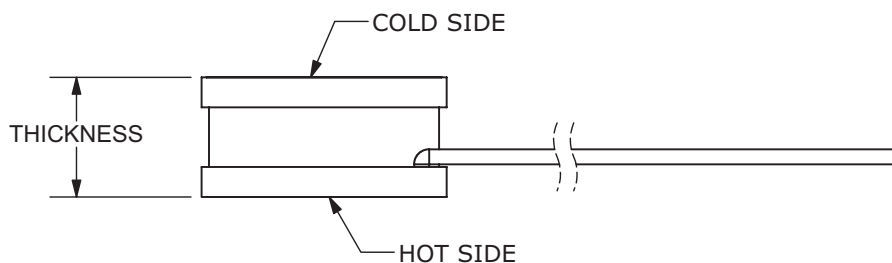
- Note:
7. Only for gold plated models. The solder that holds the peltier together melts at  $235^\circ\text{C}$ . Caution must be taken to not leave the soldering iron in contact with the surface too long, or damage to the peltier could occur.

## 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

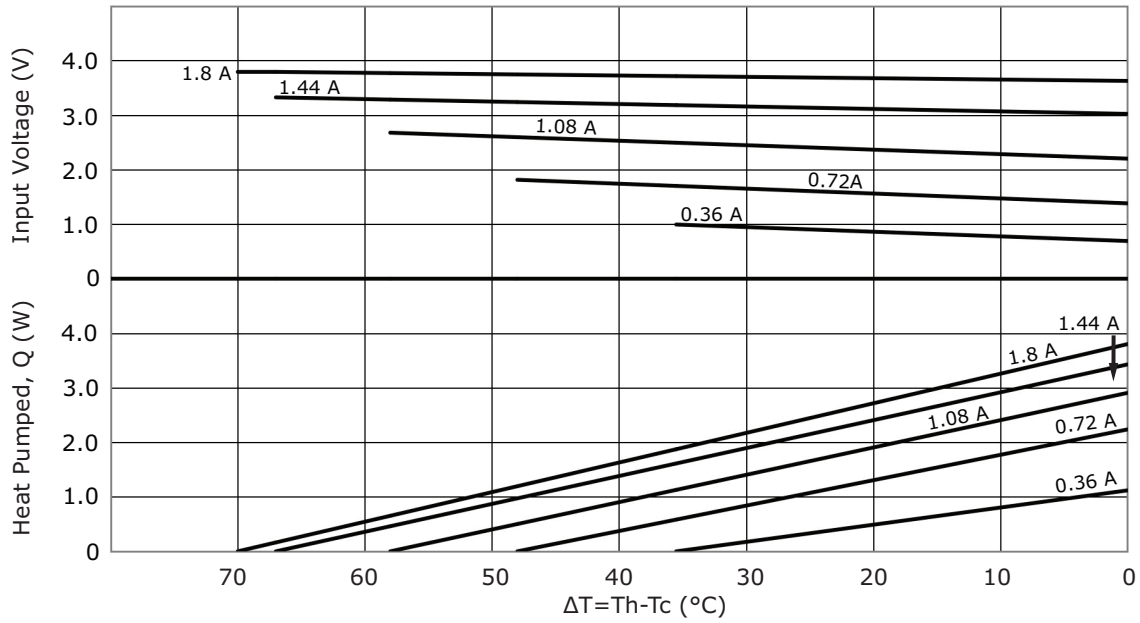
units: mm



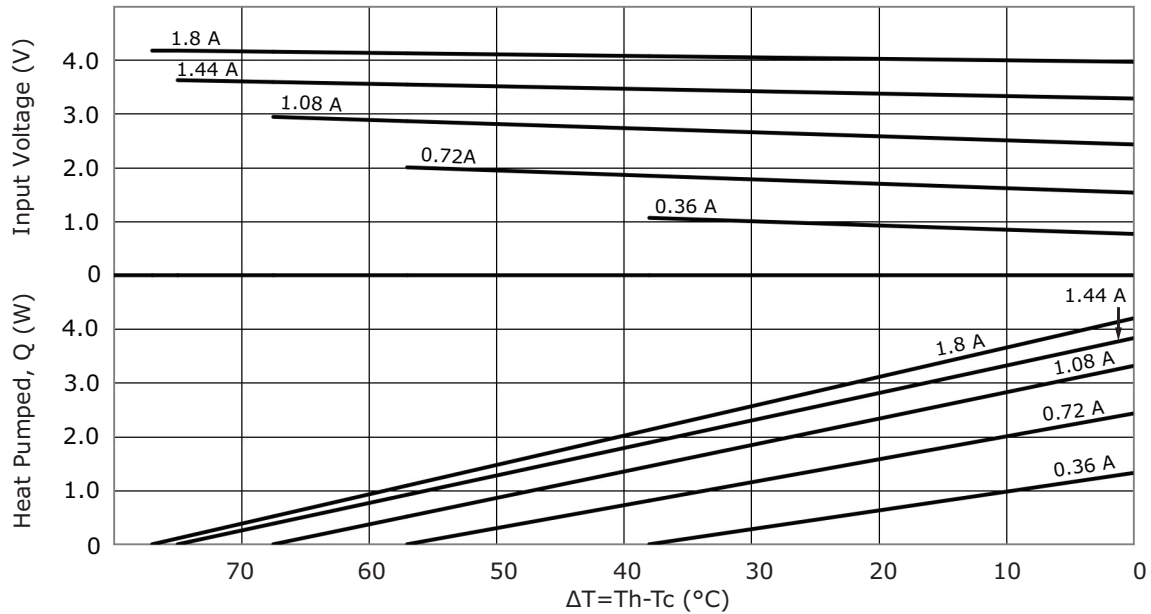
	MATERIAL	PLATING
ceramic plate	96% AL <sub>2</sub> O <sub>3</sub>	
wire leads	Ø0.25-0.3 mm annealed copper	tin
sealer	no sealing	
ceramic surface	Au plating on select models	

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

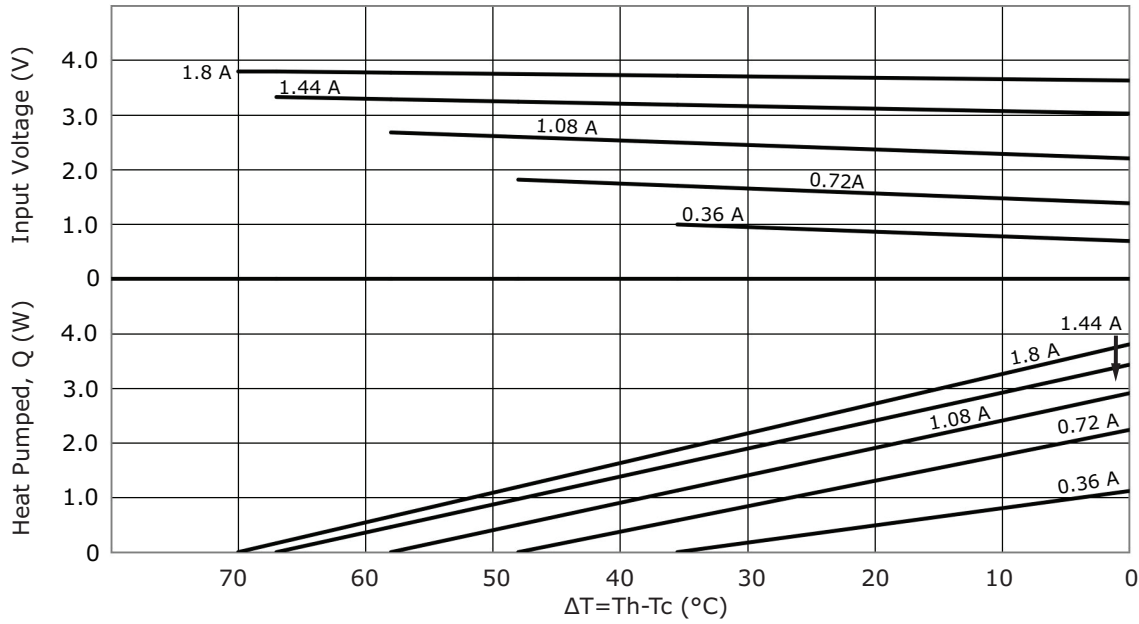
### CP1881-222 PERFORMANCE (Th=27°C)



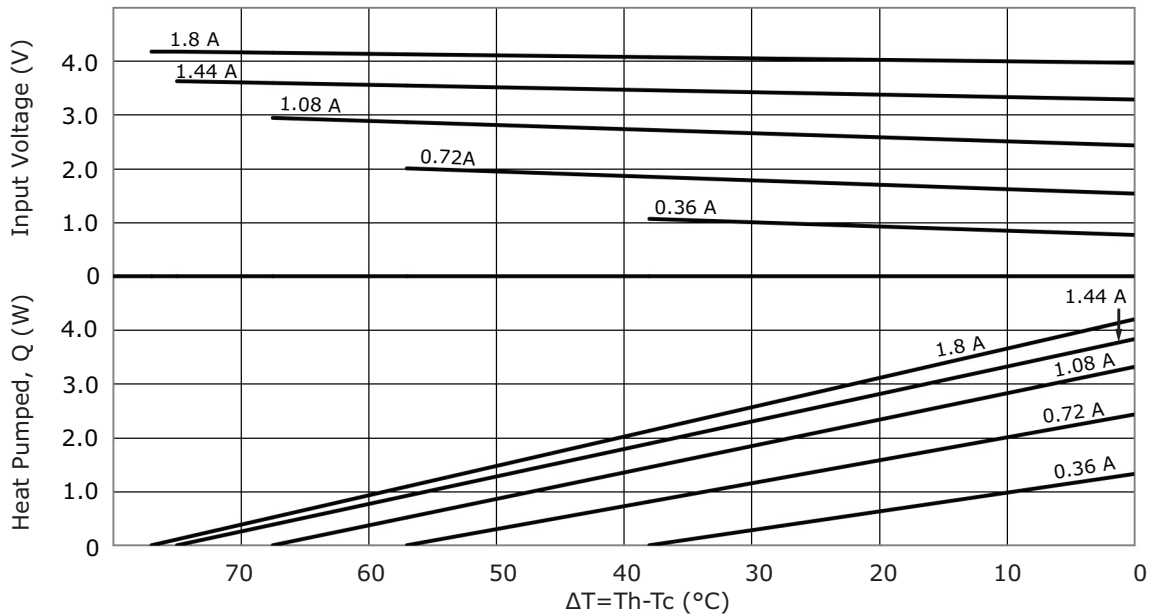
### CP1881-222 PERFORMANCE (Th=50°C)



### CP1881-254P PERFORMANCE (Th=27°C)



### CP1881-254P PERFORMANCE (Th=50°C)



## REVISION HISTORY

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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.

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