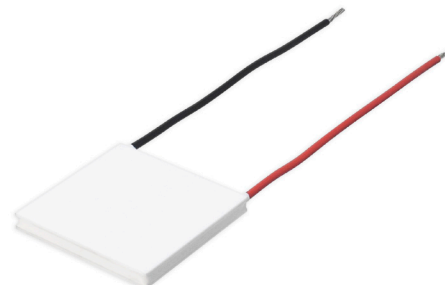


**SERIES:** CP140 | **DESCRIPTION:** PELTIER MODULE

**FEATURES**

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


**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 Qmax <sup>4</sup>		output $\Delta T_{max}$ <sup>5</sup>	
				T <sub>h</sub> =27°C [W]	T <sub>h</sub> =50°C [W]	T <sub>h</sub> =27°C [°C]	T <sub>h</sub> =50°C [°C]
CP144044	8.6	14	0.49	67	73	70	77
CP144745325	19.5	14	1.08	157	172	70	77

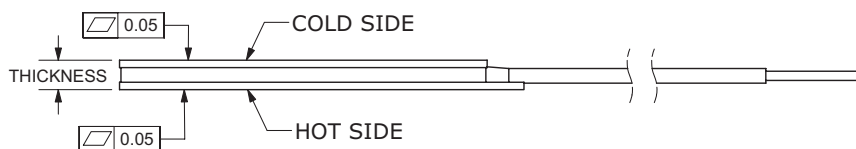
- Notes:
1. Maximum voltage at  $\Delta T_{max}$  and T<sub>h</sub>=27°C
  2. Maximum current to achieve  $\Delta T_{max}$
  3. Measured by AC 4-terminal method at 25°C
  4. Maximum heat absorbed at cold side occurs at I<sub>max</sub>, V<sub>max</sub>, and  $\Delta T=0^\circ\text{C}$
  5. Maximum temperature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

## SPECIFICATIONS

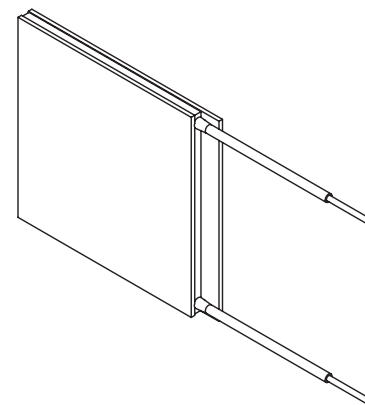
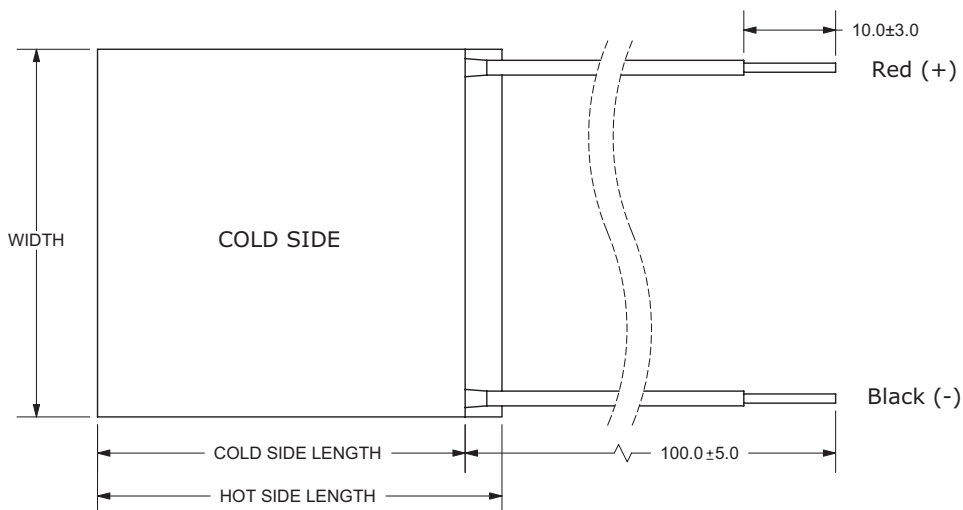
parameter	conditions/description	min	typ	max	units
solder melting temperature	connection between thermoelectric pairs	235			°C
assembly compression				1	MPa
RoHS	yes				

## MECHANICAL DRAWING

units: mm

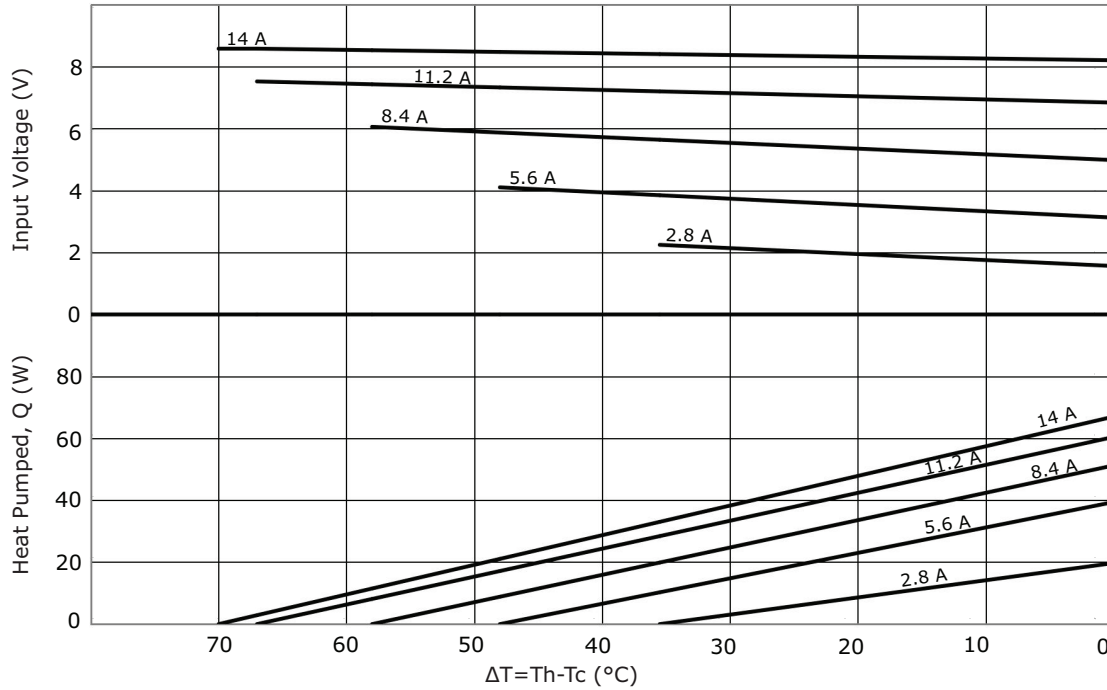


	MATERIAL	PLATING
ceramic plate	96% $Al_2O_3$	
wire leads	18 AWG	tin
sealer	silicon rubber 703 RTV (between cold and hot side plates)	
joint cover	silicon rubber 703 RTV	
marking	P/N & S/N printed on cold side surface	

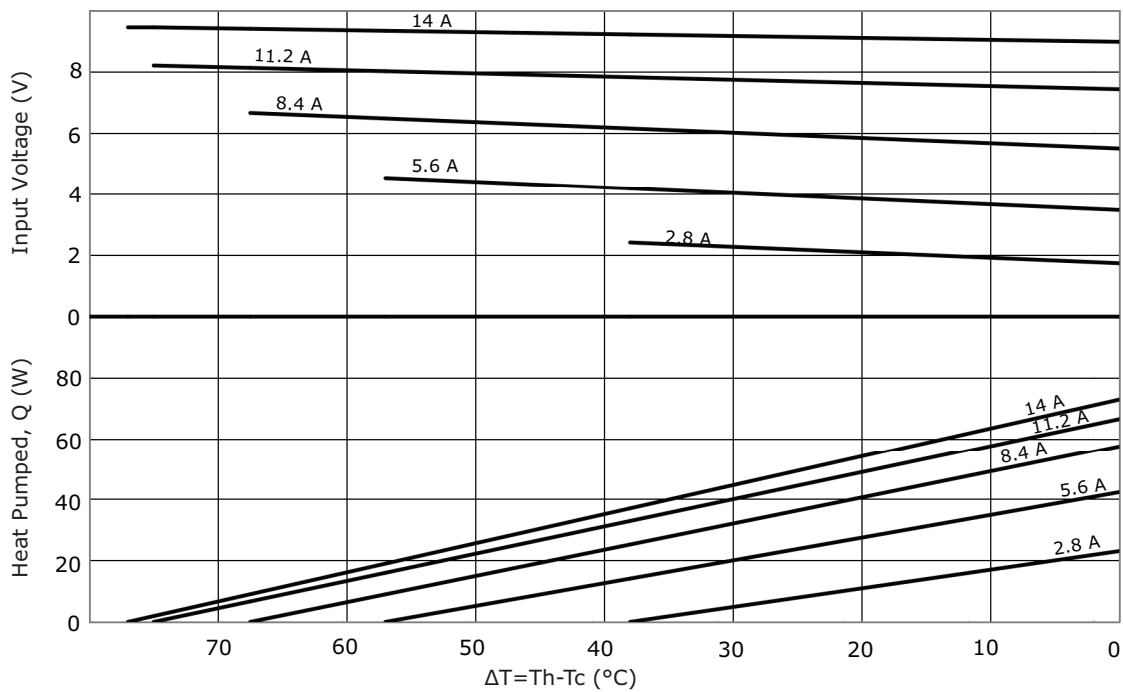


MODEL NO.	HOT SIDE LENGTH [mm]	COLD SIDE LENGTH [mm]	WIDTH [mm]	THICKNESS [mm]
CP144044	40 ±0.3	40 ±0.3	40 ±0.3	4.4 ±0.1
CP144745325	47 ±0.5	44.8 ±0.5	44.8 ±0.3	3.25 ±0.025

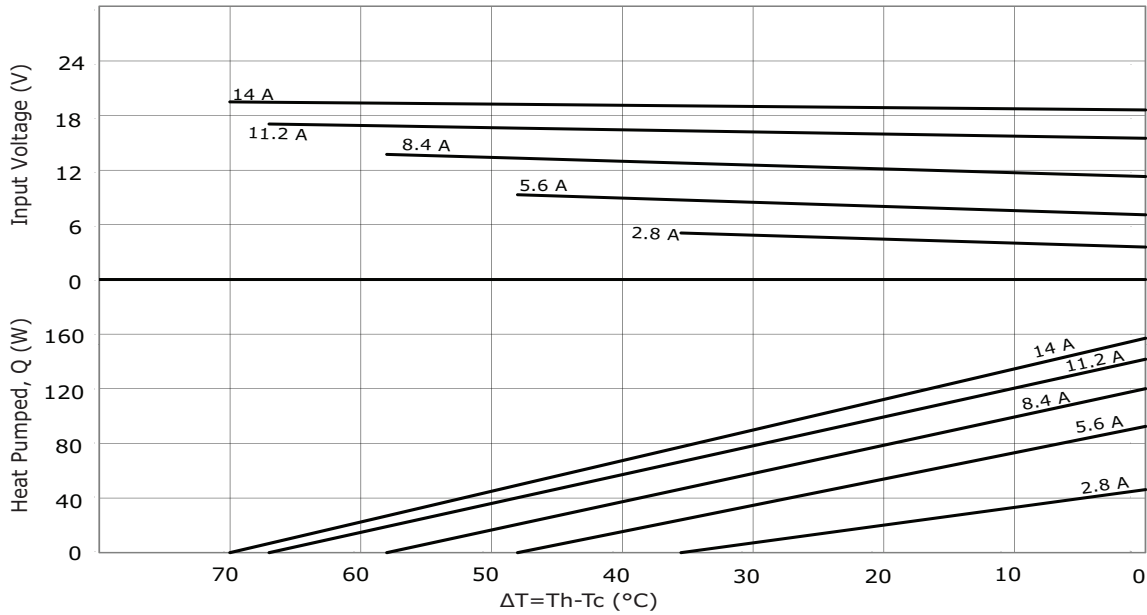
## CP144044 PERFORMANCE (Th=27°C)



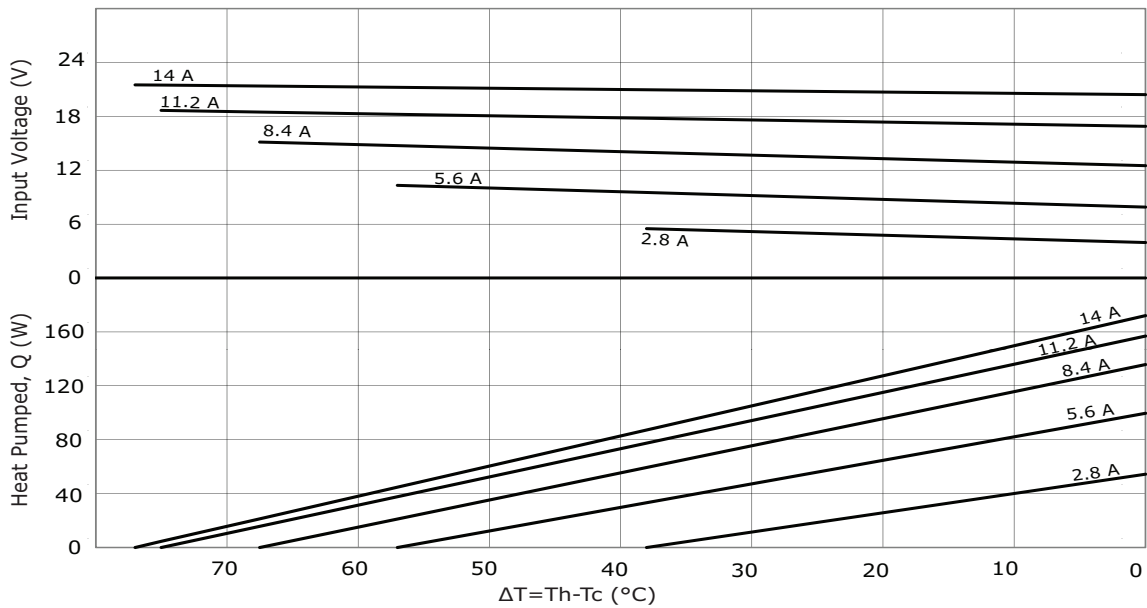
## CP144044 PERFORMANCE (Th=50°C)



## 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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