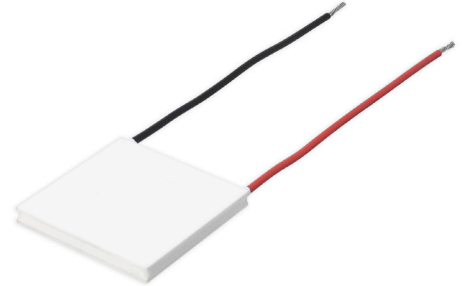




**SERIES:** CP140 | **DESCRIPTION:** PELTIER MODULE

**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>	input current <sup>2</sup>	internal resistance <sup>3</sup>	output Qmax <sup>4</sup>		output $\Delta T_{max}$ <sup>5</sup>	
	max [Vdc]	max [A]	typ [ $\Omega \pm 10\%$ ]	$T_h = 27^\circ\text{C}$ [W]	$T_h = 50^\circ\text{C}$ [W]	$T_h = 27^\circ\text{C}$ [°C]	$T_h = 50^\circ\text{C}$ [°C]
CP144044	8.6	14	0.49	67	73	70	77
CP144745325	19.5	14	1.08	157	172	70	77

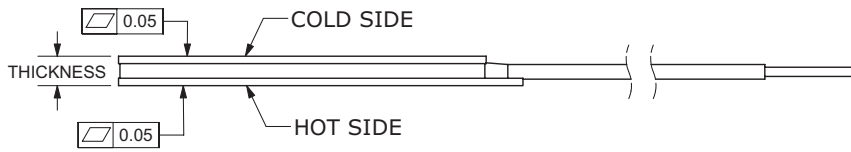
- Notes:
1. Maximum voltage at  $\Delta T_{max}$  and  $T_h = 27^\circ\text{C}$
  2. Maximum current to achieve  $\Delta T_{max}$
  3. Measured by AC 4-terminal method at  $25^\circ\text{C}$
  4. Maximum heat absorbed at cold side occurs at  $I_{max}$ ,  $V_{max}$ , and  $\Delta T = 0^\circ\text{C}$
  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)

## SPECIFICATIONS

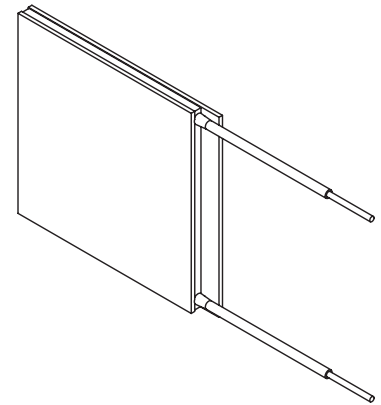
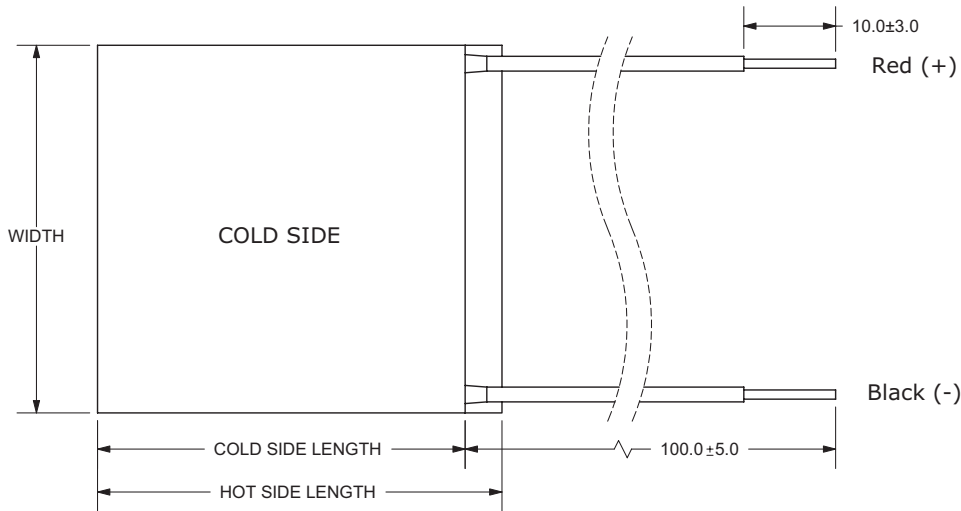
parameter	conditions/description	min	typ	max	units
solder melting temperature	connection between thermoelectric pairs	235			°C
assembly compression				1	MPa
RoHS	yes				

## MECHANICAL DRAWING

units: mm

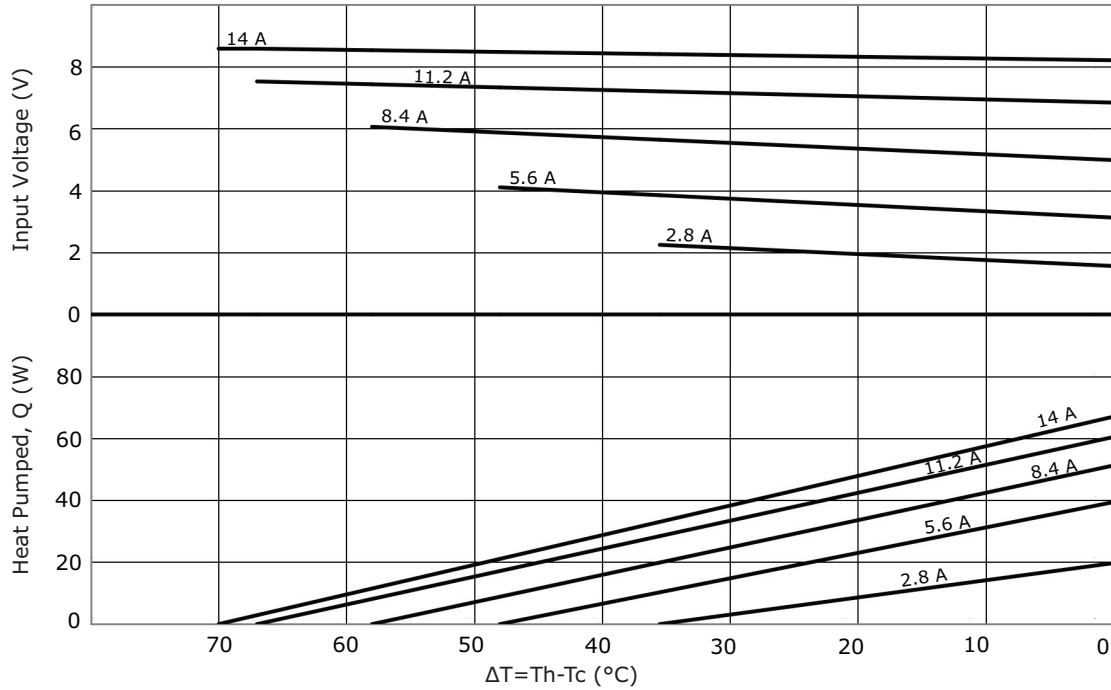


	MATERIAL	PLATING
ceramic plate	96% $Al_2O_3$	
wire leads	18 AWG	tin
sealer	silicon rubber 703 RTV (between cold and hot side plates)	
joint cover	silicon rubber 703 RTV	
marking	P/N & S/N printed on cold side surface	

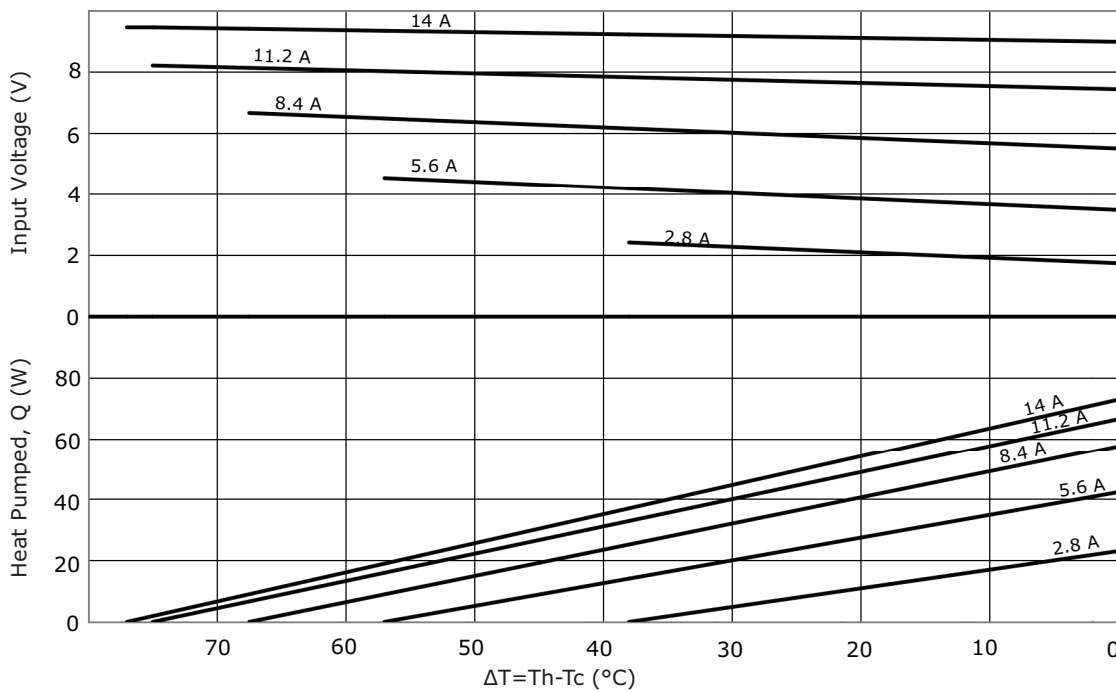


MODEL NO.	HOT SIDE LENGTH [mm]	COLD SIDE LENGTH [mm]	WIDTH [mm]	THICKNESS [mm]
CP144044	40 ±0.3	40 ±0.3	40 ±0.3	4.4 ±0.1
CP144745325	47 ±0.5	44.8 ±0.5	44.8 ±0.3	3.25 ±0.025

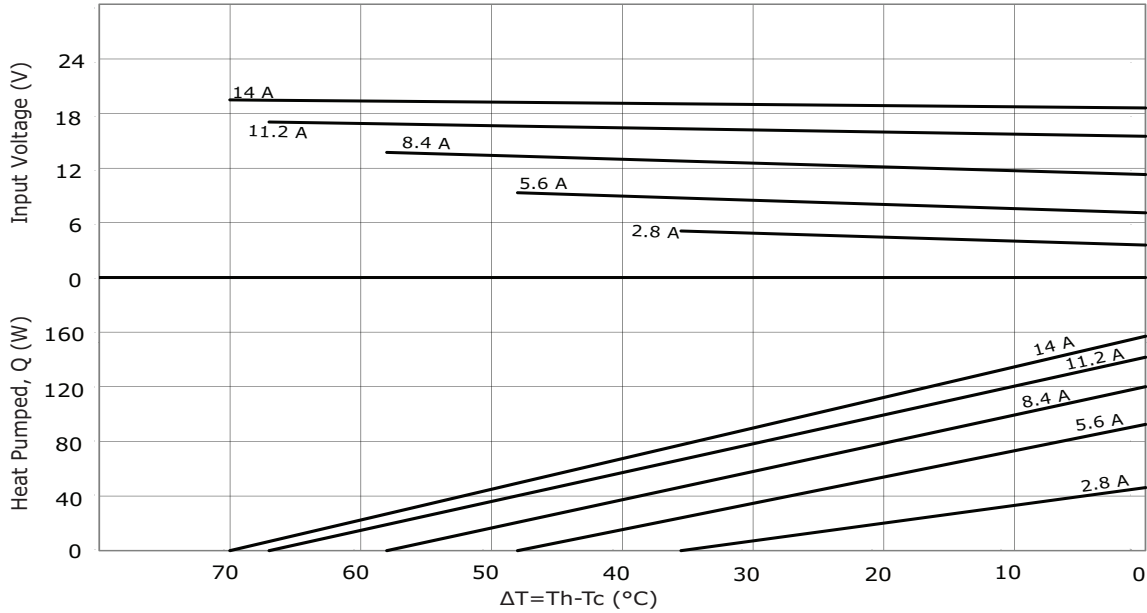
## CP144044 PERFORMANCE (Th=27°C)



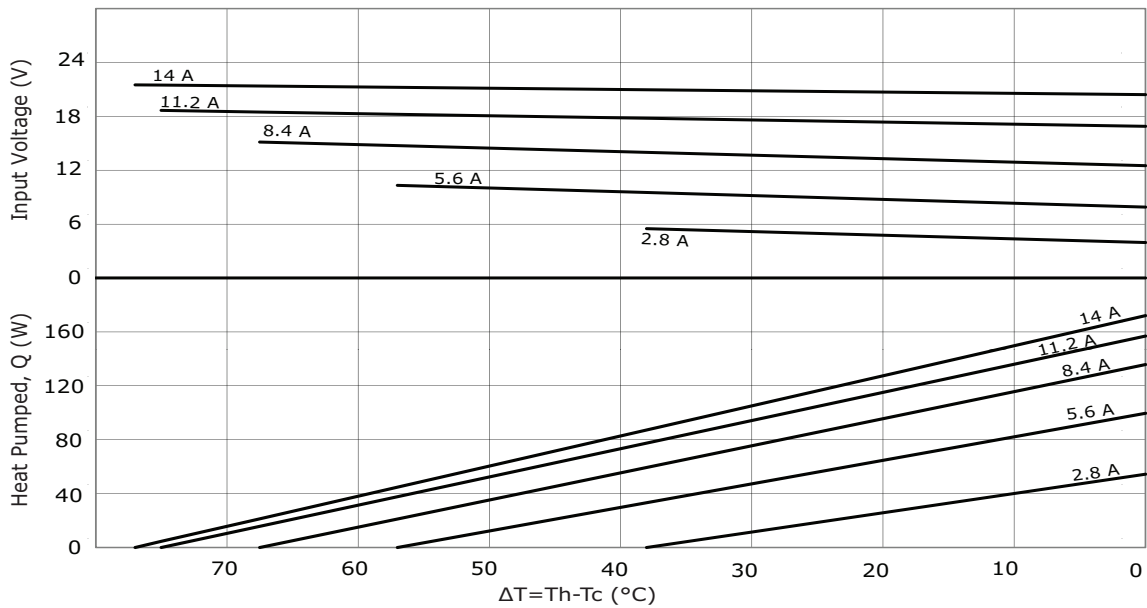
## CP144044 PERFORMANCE (Th=50°C)



## 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
1.03	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.

Same Sky reserves the right to make changes to the product at any time without notice. Information provided by Same Sky is believed to be accurate and reliable. However, no responsibility is assumed by Same Sky for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

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.

[sameskydevices.com](https://www.sameskydevices.com)