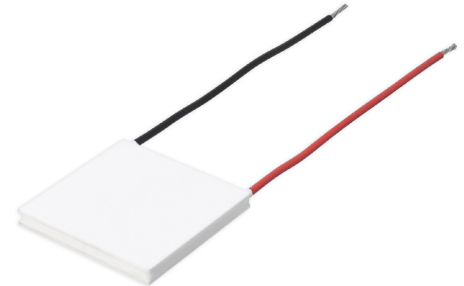


SERIES: CP140 | **DESCRIPTION:** PELTIER MODULE**FEATURES**

- 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	
				$T_h = 27^\circ\text{C}$ [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 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)

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

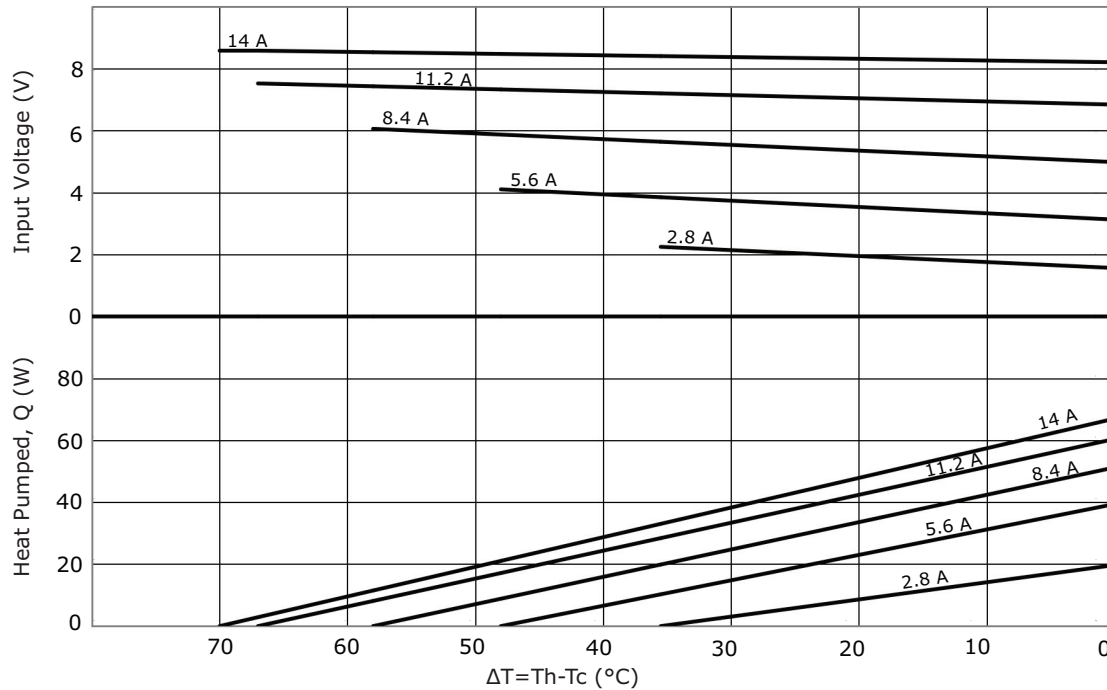
units: mm

The drawing includes a top view showing the 'COLD SIDE' and 'HOT SIDE' with a thickness dimension of 0.05 mm. A side view shows the 'COLD SIDE' and 'HOT SIDE' with dimensions for 'COLD SIDE LENGTH', 'HOT SIDE LENGTH', 'WIDTH', and 'THICKNESS'. A detail view shows the 'Red (+)' and 'Black (-)' wire leads with a length of 10.0±3.0 mm. A cross-section view shows the internal structure with a length of 100.0±5.0 mm.

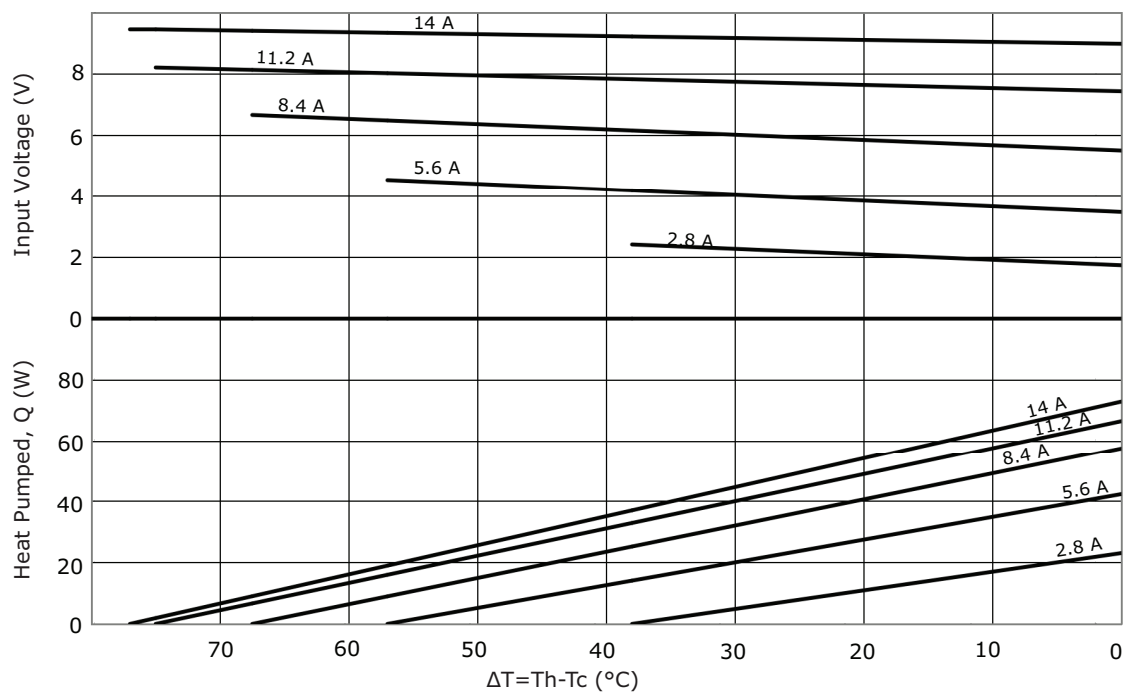
	MATERIAL	PLATING
ceramic plate	96% AL ₂ O ₃	
wire leads	18 AWG	tin
sealer	silicon rubber 703 RTV (between cold and hot side plates)	
joint cover	silicon rubber 703 RTV	
marking	P/N & S/N printed on cold side surface	

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

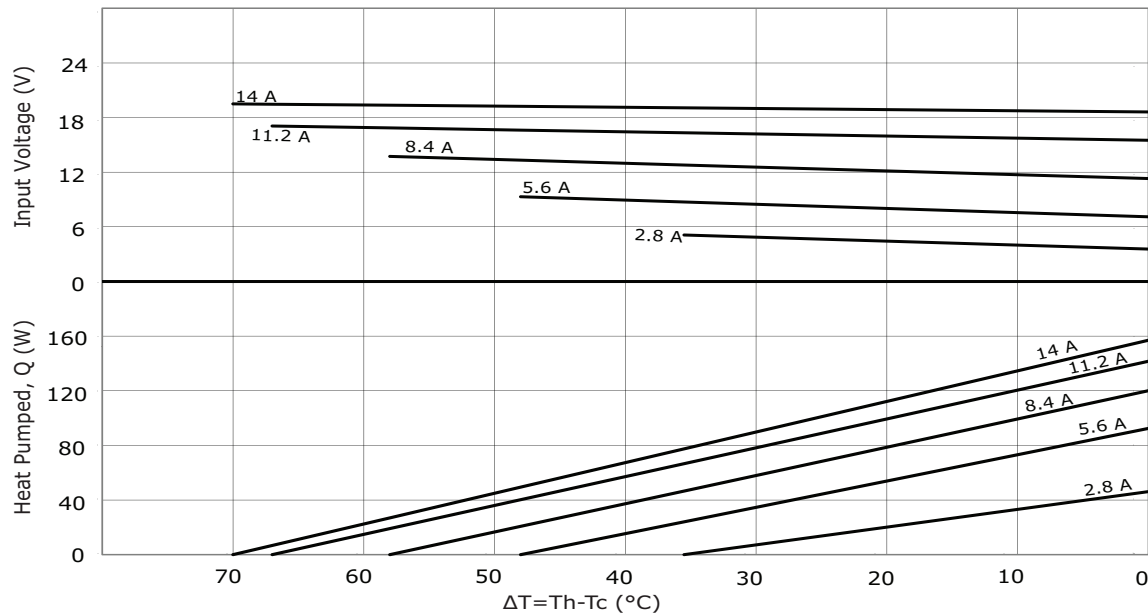
CP144044 PERFORMANCE (Th=27°C)



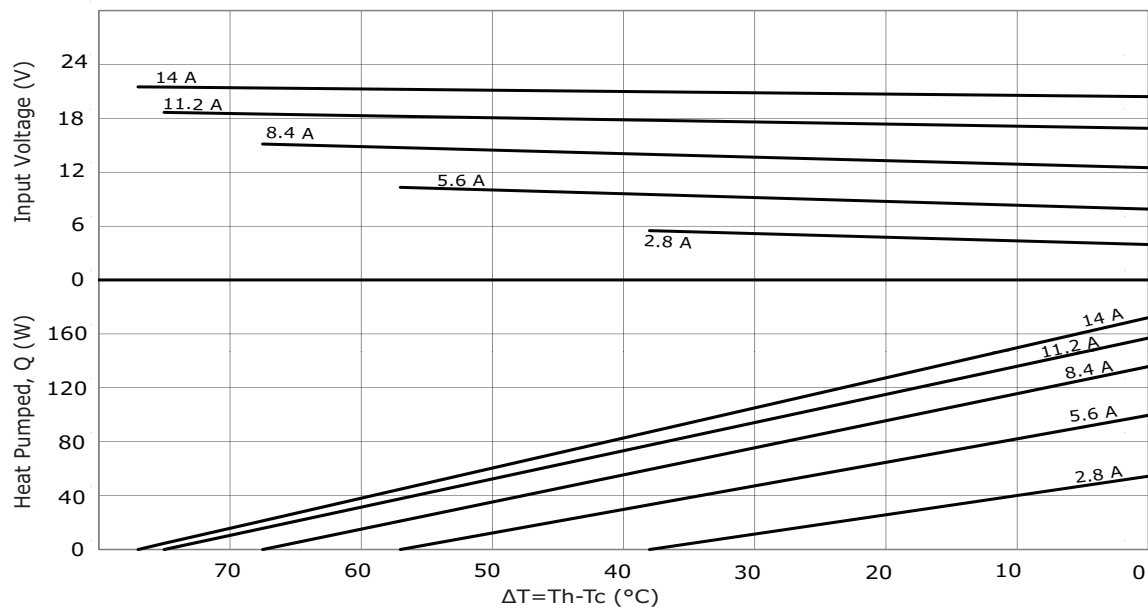
CP144044 PERFORMANCE (Th=50°C)



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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CUI Devices 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.

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