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**CUI** DEVICES

date 10/30/2019

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#### SERIES: CP70 **DESCRIPTION: PELTIER MODULE**

#### **FEATURES**

- arcTEC™ structure on select models
- solid state device
- precise temperature control
- quiet operation





MODEL	input voltage¹	input current²	internal resistance³	output Qmax⁴				•
	max (Vdc)	max (A)	$ ext{typ} \ (\Omega \pm 10\%)$	T <sub>h</sub> =27°C (W)	T <sub>h</sub> =50°C (W)	<b>T<sub>h</sub>=27°C</b> (°C)	<b>T<sub>h</sub>=50°C</b> (°C)	
CP70137	2.1	7.0	0.24	7.5	8.3	68	75	
CP70237	3.8	7.0	0.42	13.6	15.1	68	75	
CP70301537	4.2	7.0	0.48	15.4	17.1	68	75	
CP70337 <sup>6</sup>	8.6	7.0	1.0	31.0	34.6	70	77	
CP70437 <sup>6</sup>	15.4	7.0	1.75	55.0	60.5	70	77	

Notes:

- 1. Maximum voltage at  $\Delta T$  max and  $T_h$ =27°C

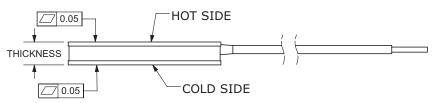
- 1. Maximum voltage at  $\Delta T$  max and  $T_{m-2}/C$ 2. Maximum current to achieve  $\Delta T$  max 3. Measured by AC 4-terminal method at 25°C 4. Maximum heat absorbed at cold side occurs at  $I_{max'}$ ,  $V_{max'}$ , and  $\Delta T$ =0°C 5. Maximum temperature difference occurs at  $I_{max'}$ ,  $V_{max'}$ , and Q=0W ( $\Delta T$  max measured in a vacuum at 1.3 Pa) 6. Designed with arcTEC<sup>TM</sup> structure

#### **SPECIFICATIONS**

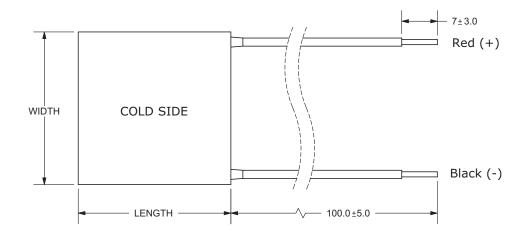
parameter	conditions/description	min	typ	max	units
solder melting temperature	connection between thermoelectric pairs	235			°C
assembly compression				1	MPa
hot side plate				80	°C
RoHS	yes				

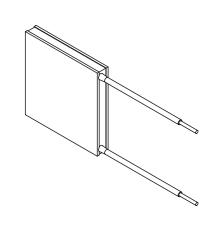
#### **MECHANICAL DRAWING**





	MATERIAL	PLATING	
ceramic plate	96% AL <sub>2</sub> O <sub>3</sub>		
wire leads	20 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		

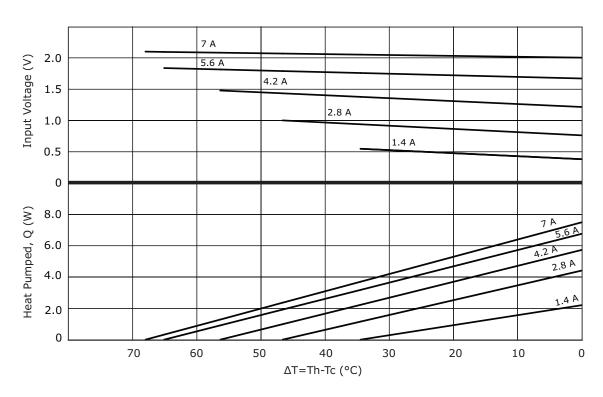




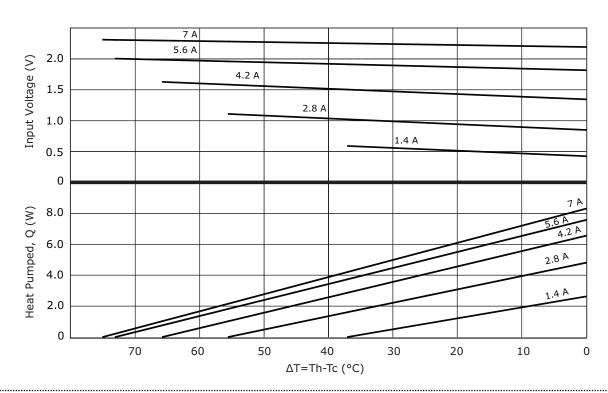
MODEL NO.	LENGTH (mm)	WIDTH (mm)	THICKNESS (mm)
CP70137	15 ±0.3	15 ±0.3	3.7 ±0.1
CP70237	20 ±0.3	20 ±0.3	3.7 ±0.1
CP70301537	30 ±0.3	15 ±0.3	3.7 ±0.1
CP703371	30 ±0.3	30 ±0.3	3.7 ±0.1
CP704371	40 ±0.3	40 ±0.3	3.7 ±0.1

Notes: 1. Wire lead strip length on models CP70337 & CP70437 is  $10 \pm 3.0$  mm.

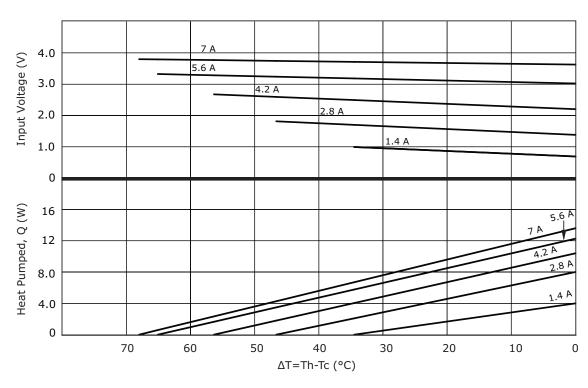
## CP70137 PERFORMANCE (Th=27°C)



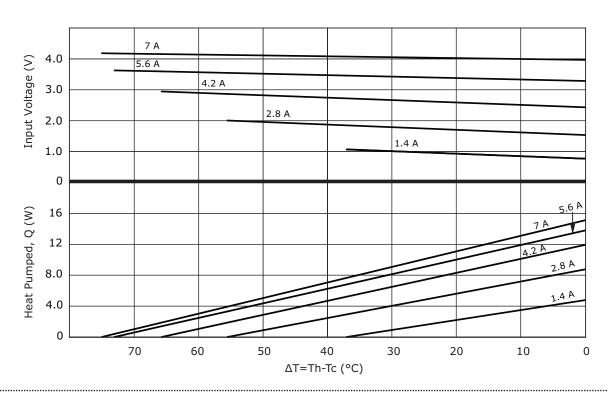
#### CP70137 PERFORMANCE (Th=50°C)



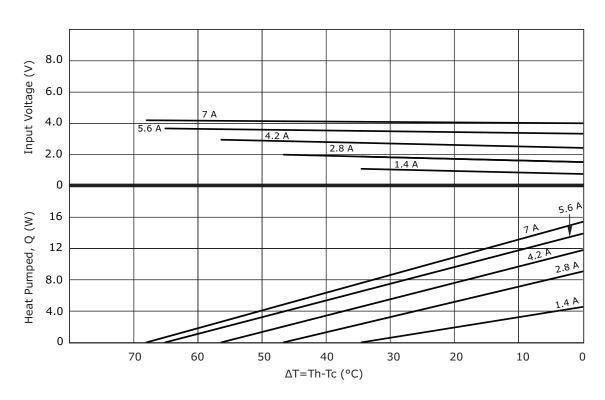
## CP70237 PERFORMANCE (Th=27°C)



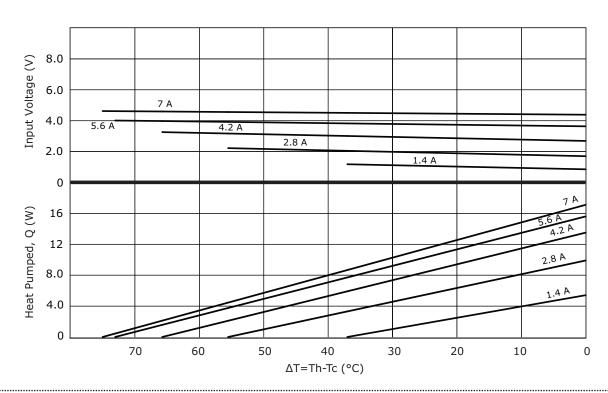
#### CP70237 PERFORMANCE (Th=50°C)



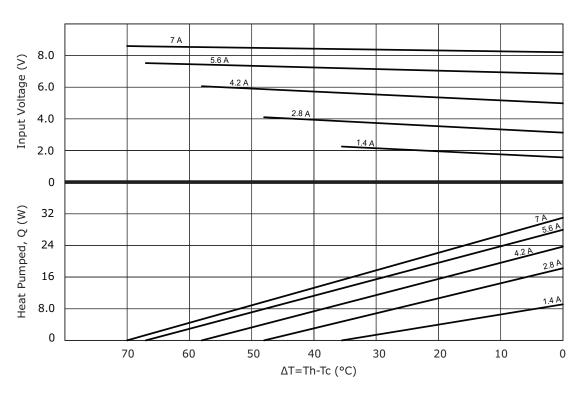
#### CP70301537 PERFORMANCE (Th=27°C)



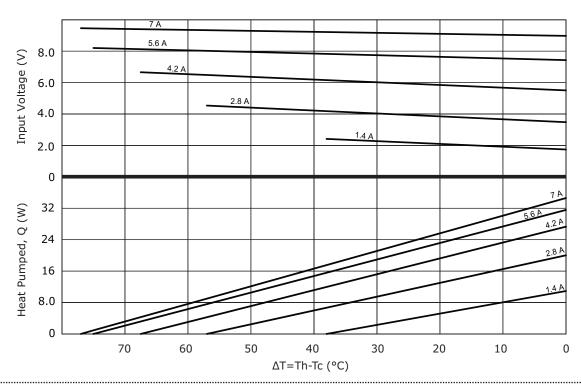
#### CP70301537 PERFORMANCE (Th=50°C)



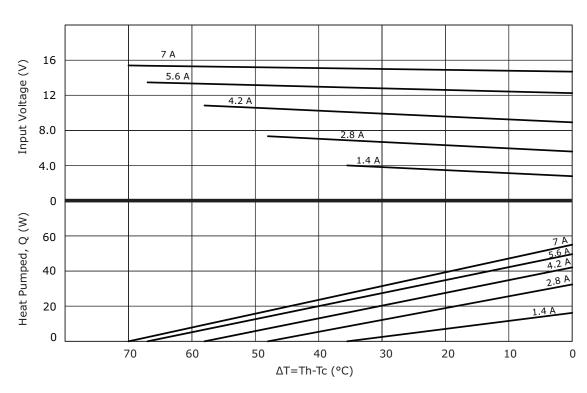
## CP70337 PERFORMANCE (Th=27°C)



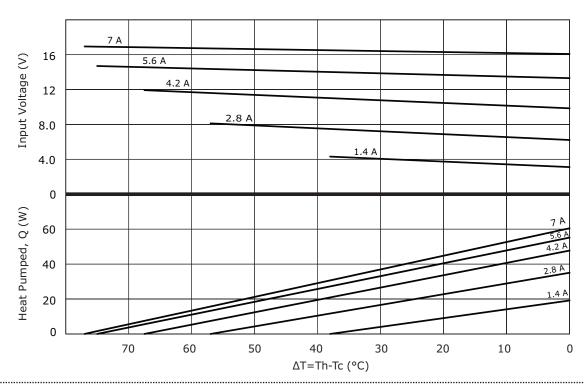
#### CP70337 PERFORMANCE (Th=50°C)



## CP70437 PERFORMANCE (Th=27°C)



#### CP70437 PERFORMANCE (Th=50°C)



Additional Resources: Product Page | 3D Model

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#### **REVISION HISTORY**

rev.	description	date
1.0	initial release	09/08/2016
1.01	changed models CP70337 & CP70437 to arcTEC™ structure	12/01/2017
1.02	changed thickness of CP70137, CP70237, CP70301537 models	09/19/2018
1.03	brand update	10/30/2019

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

# **CUI** DEVICES

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