

#### Ceramic Plate Series Thermoelectric Cooler

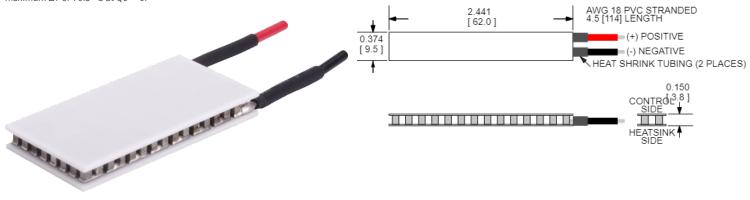
The CP14-51-06-L1-W4.5 is a high-performance and highly reliable standard Thermoelectric Cooler. Assembled with Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide ceramics. It has a maximum Qc of 19.8 Watts when  $\Delta T=0$  and a maximum  $\Delta T$  of 70.5 °C at Qc = 0.

#### **Features**

- Compact geometric sizes
- DC Operation
- RoHS-compliant

#### **Applications**

- Thermoelectric Coolers for Reagent Storage
- Thermoelectric Coolers for Handheld Cosmetic Lasers
- Cooling for Centrifuges
- Heads-Up Displays, Imaging Sensors
- Peltier Cooling for Machine Vision

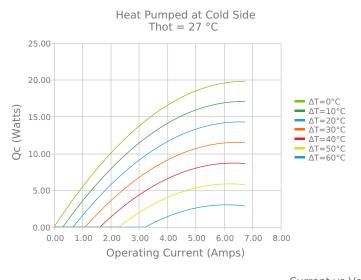


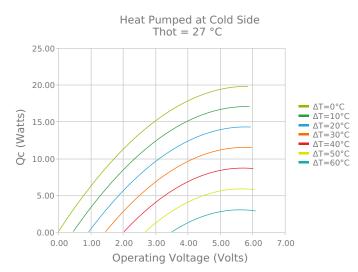
CERAMIC MATERIAL: Al₂O₃ SOLDER CONSTRUCTION: 138°C. BiSn

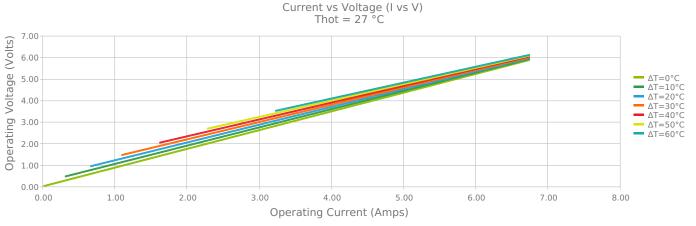
INCHES [ MM ]

#### **ELECTRICAL AND THERMAL PERFORMANCE**

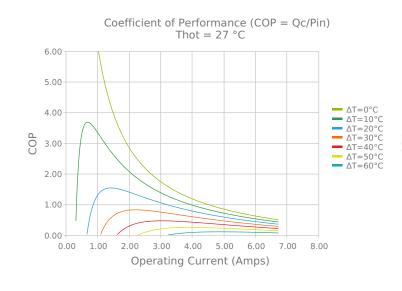
For maximum performance, be sure to orient the CONTROL side of the TEC against the application to be managed and the HEATSINK side against the heat sink or other heat rejection method. The CONTROL side is always opposite the side with lead attachments. Lead attachment is a passive heat loss and less impactful if located on the side that attaches to the heat exchanger.

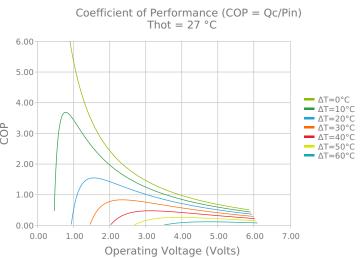


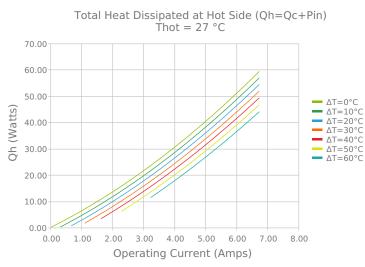


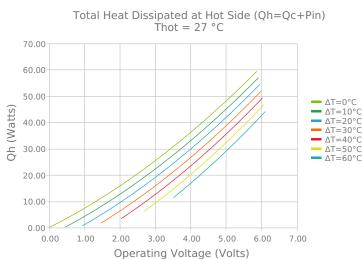


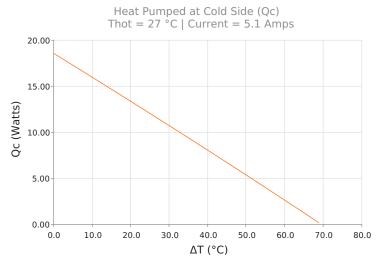


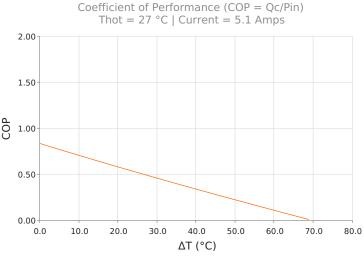














## **SPECIFICATIONS\***

**Hot Side Temperature** 

 $Qcmax (\Delta T = 0)$ 

 $\Delta T max (Qc = 0)$ 

Imax (I @ \Darkstrum \

Vmax (V @  $\Delta$ Tmax)

**Module Resistance** 

**Max Operating Temperature** 

Weight

27.0 °C	35.0 °C	50.0 °C
19.8 Watts	20.4 Watts	21.5 Watts
70.5°C	73.5°C	78.8°C
6.0 Amps	5.9 Amps	5.9 Amps
5.6 Volts	5.8 Volts	6.2 Volts
0.87 Ohms	0.91 Ohms	0.97 Ohms
80 °C		
10.0 gram(s)		

## **FINISHING OPTIONS**

Suffix	<b>Thickness</b>	Flatness / Parallelism	<b>Hot Face</b>	<b>Cold Face</b>	<b>Lead Length</b>
L1	3.810 ±0.025 mm 0.150 ± 0.0010 in	0.025 mm / 0.025 mm 0.001 in / 0.001 in	Lapped	Lapped	114.3 mm 4.50 in

## **SEALING OPTIONS**

Suffix	Sealant	Color	<b>Temp Range</b>	Description
	None			No sealing specified

# **NOTES**

- 1. Max operating temperature: 80°C
- 2. Do not exceed Imax or Vmax when operating module
- 3. Reference assembly guidelines for recommended installation
- 4. Solder tinning also available on metallized ceramics

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<sup>\*</sup> Specifications reflect thermoelectric coefficients updated March 2020