

#### **Ceramic Plate Series Thermoelectric Cooler**

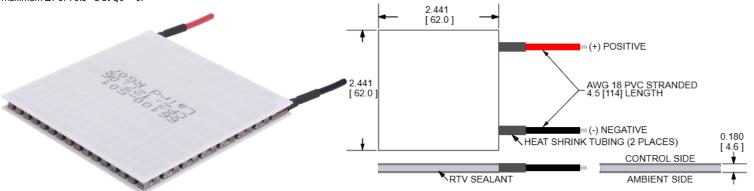
The CP2-127-06-L1-RT-W4.5 is a high-performance and highly reliable standard Thermoelectric Cooler. Assembled with Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide ceramics. It has a maximum Qc of 117.8 Watts when  $\Delta T=0$  and a maximum  $\Delta T$  of 70.5 °C at 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
- Peltier Cooling for Machine Vision



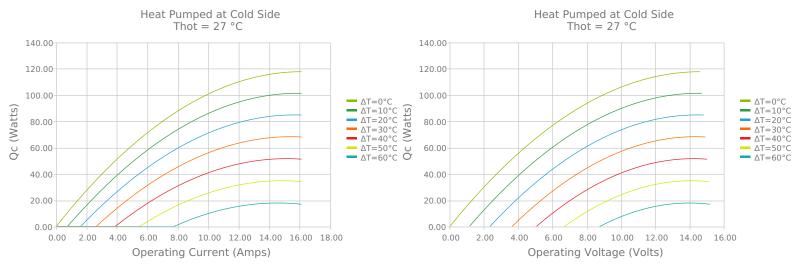
CERAMIC MATERIAL: Al<sub>2</sub>O<sub>3</sub> SOLDER CONSTRUCTION: 138°C, BiSn

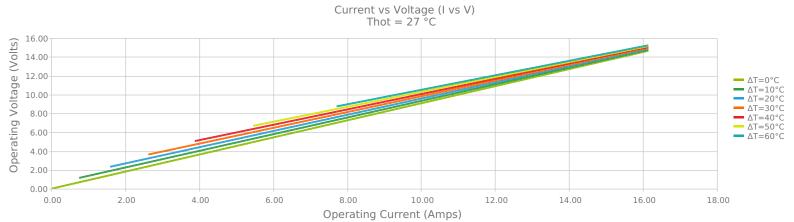
INCHES [ MM ]

Note: Allow 0.020 in [0.5 mm] around perimeter of the thermoelectric cooler and lead wire attachment to accommodate sealant

## 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 AMBIENT 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.







20.00 0.00

0.0

20.0

10.0

30.0

40.0

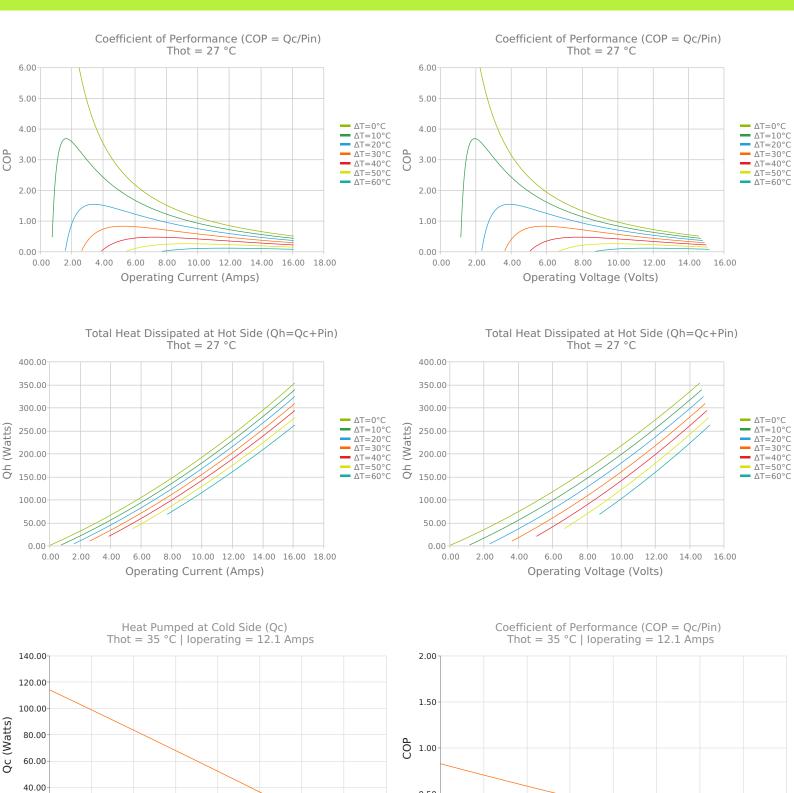
ΔT (°C)

50.0

60.0

70.0

80.0



0.50

0.00-

0.0

20.0

10.0

30.0

40.0

ΔT (°C)

50.0

60.0

70.0

80.0



# **Specifications**

Hot Side Temperature	27.0 °C	35.0 °C	50.0 °C
Qcmax ( $\Delta T = 0$ )	117.8 Watts	121.4 Watts	127.7 Watts
$\Delta T max (Qc = 0)$	70.5°C	73.5°C	78.8°C
Imax (I @ ΔTmax)	14.2 Amps	14.2 Amps	14.0 Amps
Vmax (V @ ΔTmax)	13.9 Volts	14.4 Volts	15.4 Volts
Module Resistance	0.91 Ohms	0.94 Ohms	1.02 Ohms
Max Operating Temperature	80 °C		
Weight	68.0 gram(s)		

## Finishing Options

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
L1	4.572 ±0.025 mm 0.180 ± 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	Temp Range	Description
RT	RTV	Translucent or White	-60 to 204°C	Non-corrosive, silicone adhesive

### **Notes**

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

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