

Ceramic Plate Series Thermoelectric Cooler

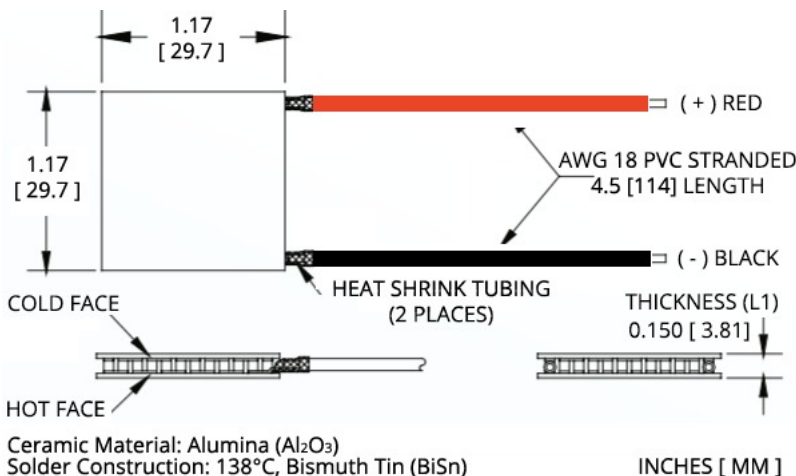
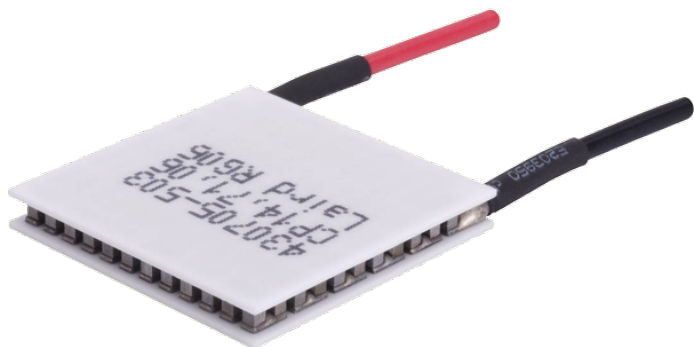
The CP14-71-06-L1-EP-W6 is a high-performance and highly reliable standard Thermoelectric Cooler. Assembled with Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide ceramics. It has a maximum Q_c of 27.6 Watts when $\Delta T = 0$ and a maximum ΔT of 70.5 °C at $Q_c = 0$.

Features

- Compact geometric sizes
- DC Operation
- RoHS-compliant

Applications

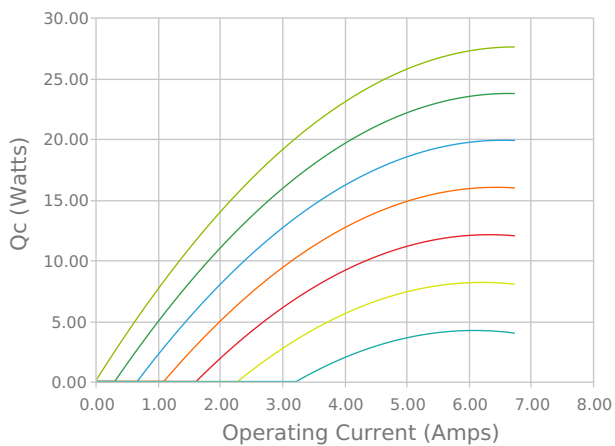
- Thermoelectric Coolers for Reagent Storage
- Thermoelectric Coolers for Handheld Cosmetic Lasers
- Cooling for Centrifuges
- Heads-Up Displays, Imaging Sensors
- Peltier Cooling for Machine Vision



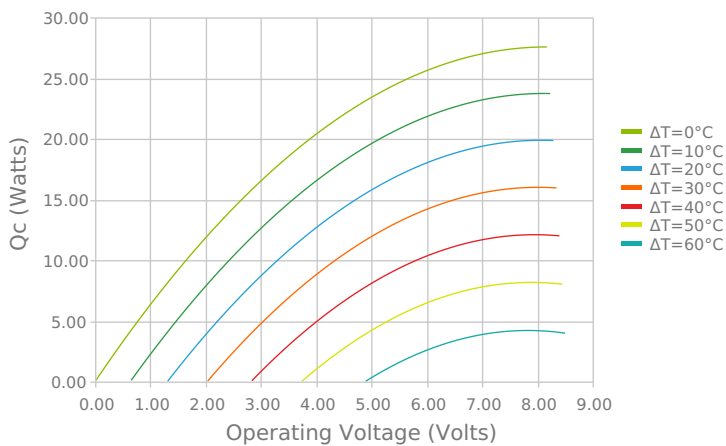
Note: Allow 0.020 in [0.5 mm] around perimeter of the thermoelectric cooler and lead wire attachment to accommodate sealant

ELECTRICAL AND THERMAL PERFORMANCE

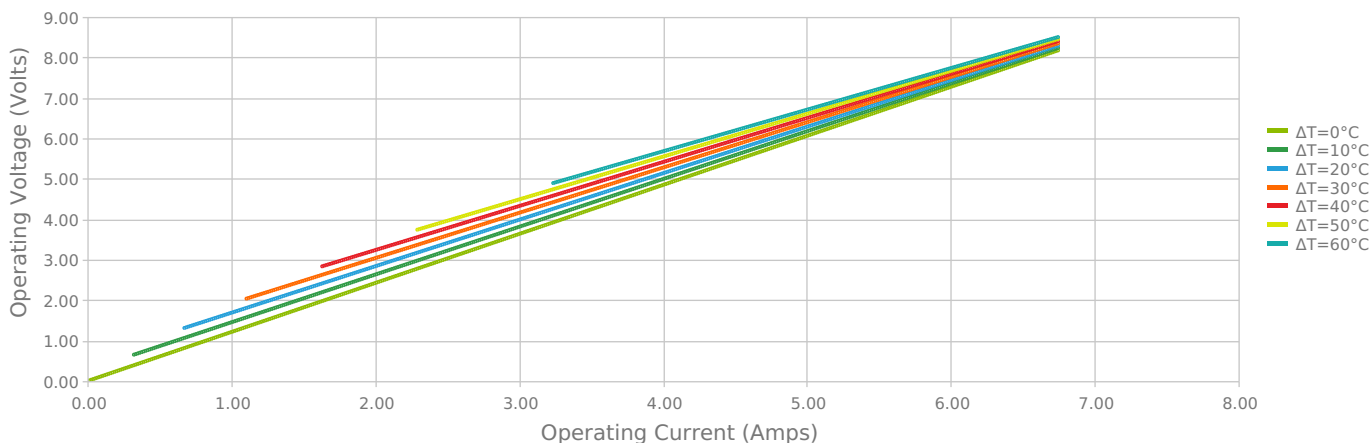
Heat Pumped at Cold Side
 $T_{hot} = 27^\circ C$



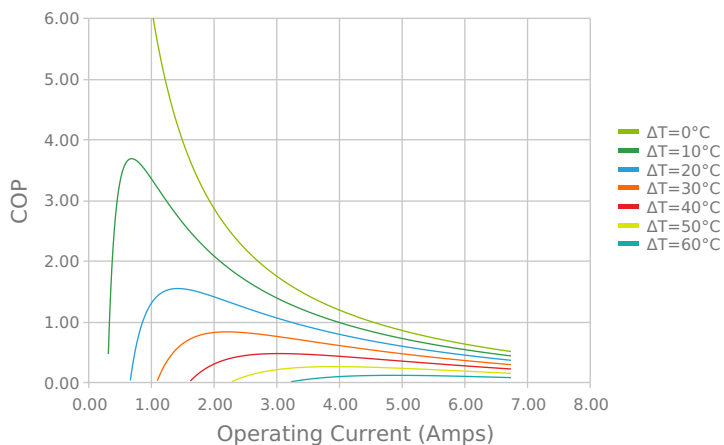
Heat Pumped at Cold Side
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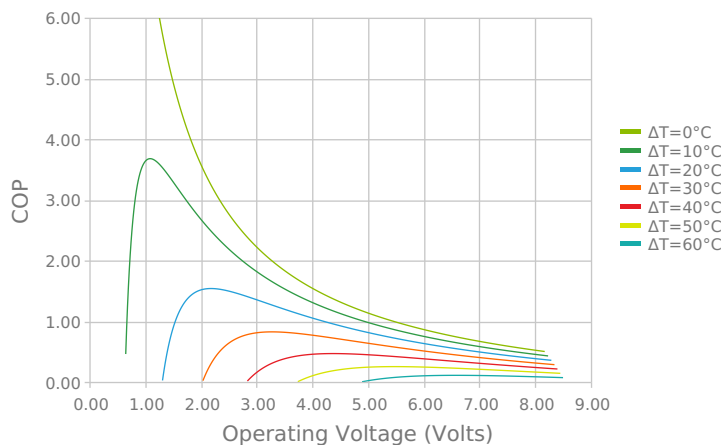
Current vs Voltage (I vs V)
 $T_{hot} = 27^\circ C$



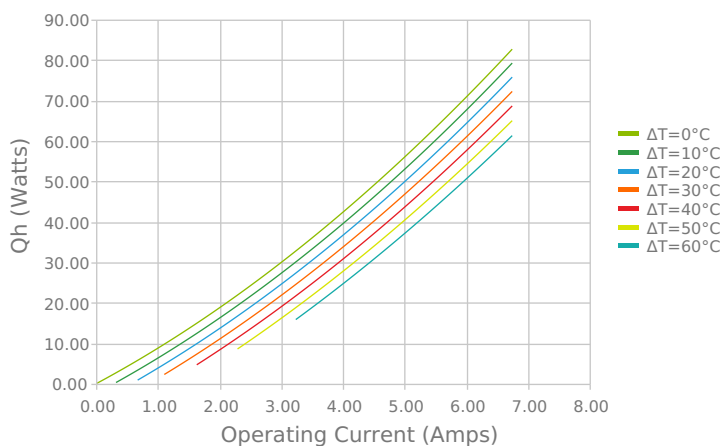
Coefficient of Performance (COP = Q_c/P_{in})
 $T_{hot} = 27\text{ }^{\circ}\text{C}$



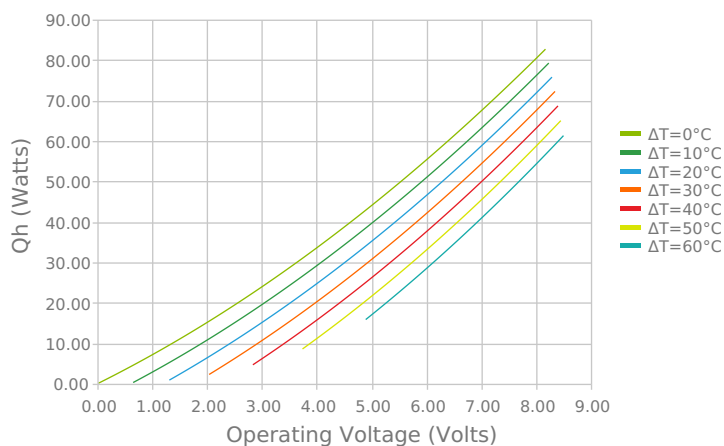
Coefficient of Performance (COP = Q_c/P_{in})
 $T_{hot} = 27\text{ }^{\circ}\text{C}$



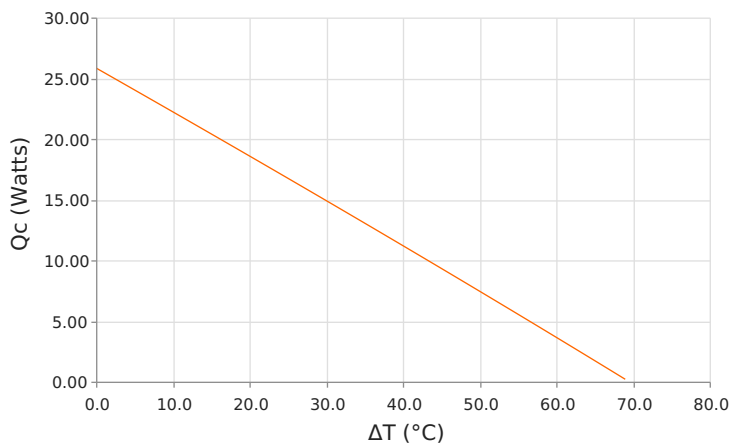
Total Heat Dissipated at Hot Side ($Q_h=Q_c+P_{in}$)
 $T_{hot} = 27\text{ }^{\circ}\text{C}$



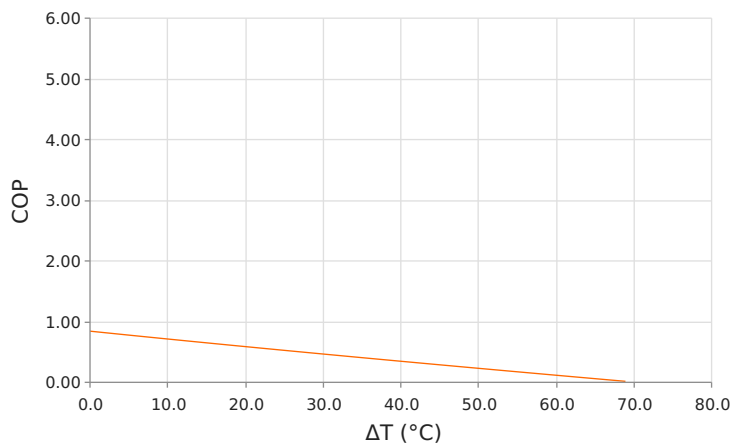
Total Heat Dissipated at Hot Side ($Q_h=Q_c+P_{in}$)
 $T_{hot} = 27\text{ }^{\circ}\text{C}$



Heat Pumped at Cold Side (Q_c)
 $T_{hot} = 27\text{ }^{\circ}\text{C}$ | Current = 5.1 Amps



Coefficient of Performance (COP = Q_c/P_{in})
 $T_{hot} = 27\text{ }^{\circ}\text{C}$ | Current = 5.1 Amps



SPECIFICATIONS*

Hot Side Temperature

Qcmax ($\Delta T = 0$)

ΔT_{max} ($Q_c = 0$)

I_{max} (I @ ΔT_{max})

V_{max} (V @ ΔT_{max})

Module Resistance

Max Operating Temperature

Weight

27.0 °C

35.0 °C

50.0 °C

27.6 Watts	28.4 Watts	29.9 Watts
70.5°C	73.5°C	78.8°C
6.0 Amps	5.9 Amps	5.9 Amps
7.8 Volts	8.1 Volts	8.6 Volts
1.21 Ohms	1.26 Ohms	1.36 Ohms
80 °C		
13.0 gram(s)		

* Specifications reflect thermoelectric coefficients updated March 2020

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
L1	3.810 ±0.025 mm 0.150 ± 0.001 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
EP	Epoxy	Black	-55 to 150°C	Low density syntactic foam epoxy encapsulant

NOTES

1. Max operating temperature: 80°C
2. Do not exceed I_{max} or V_{max} when operating module
3. Reference assembly guidelines for recommended installation
4. Solder tinning also available on metallized ceramics

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