PolarTEC™ PT Series PT6-7-F2-3030-TB-RT-W6
MFG Part Number: 430027-508

PolarTEC™ PT Series Thermoelectric Cooler

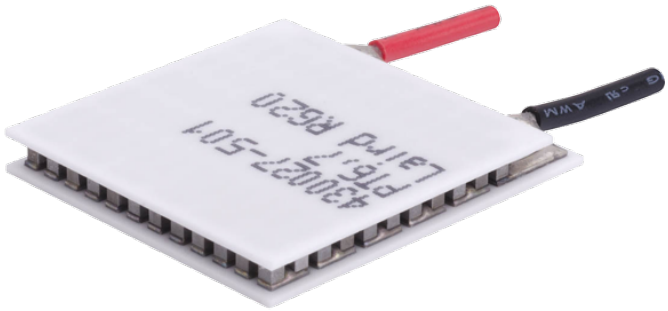
The PT6-7-F2-3030-TB-RT-W6 is a porch-style thermoelectric cooler. The hot side ceramic has an extended edge, which allows for a strong lead attachment to accommodate the wiring of multiple thermoelectric coolers into an array. It has a maximum Qc of 28.3 Watts when ΔT = 0 and a maximum ΔT of 70.5 °C at Qc = 0.

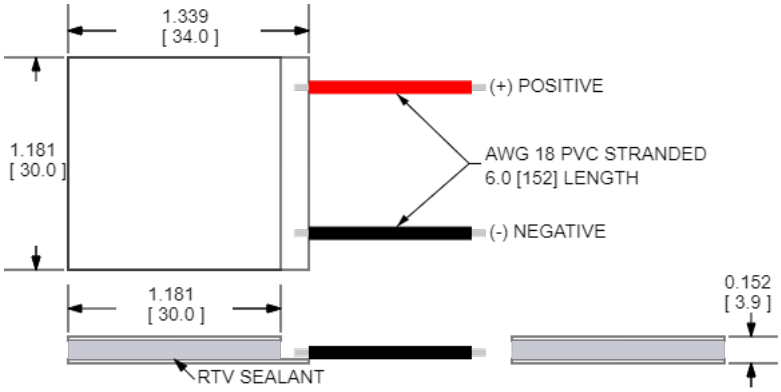
Features

- Strong lead attachment
- Precise temperature control
- Reliable solid-state operation
- No sound or vibration
- DC operation
- RoHS-compliant

Applications

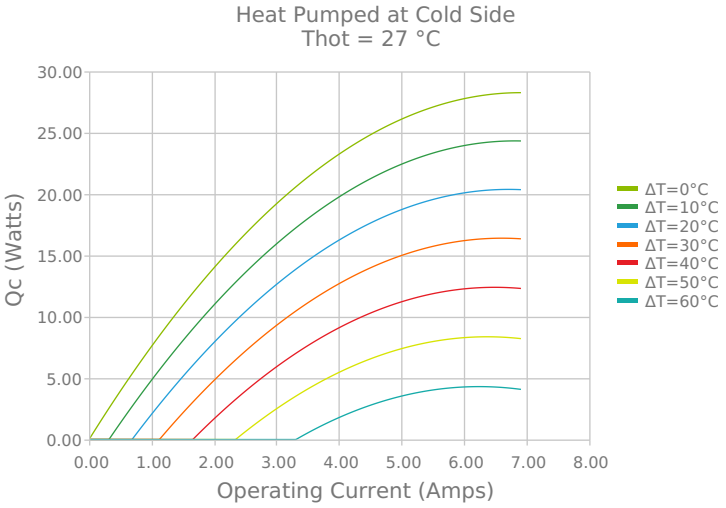
- Cooling for Mobile Base Stations and Cell Towers
- Thermal Management Solutions for Beverage Cooling
- Cooling for Centrifuges
- Energy Storage Systems

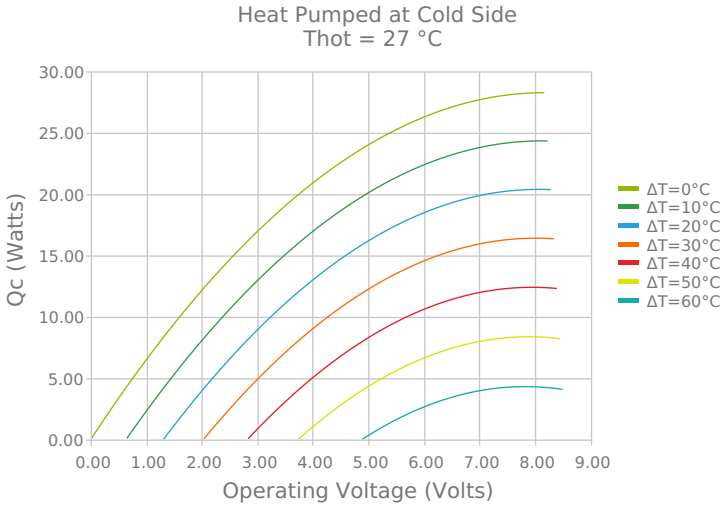


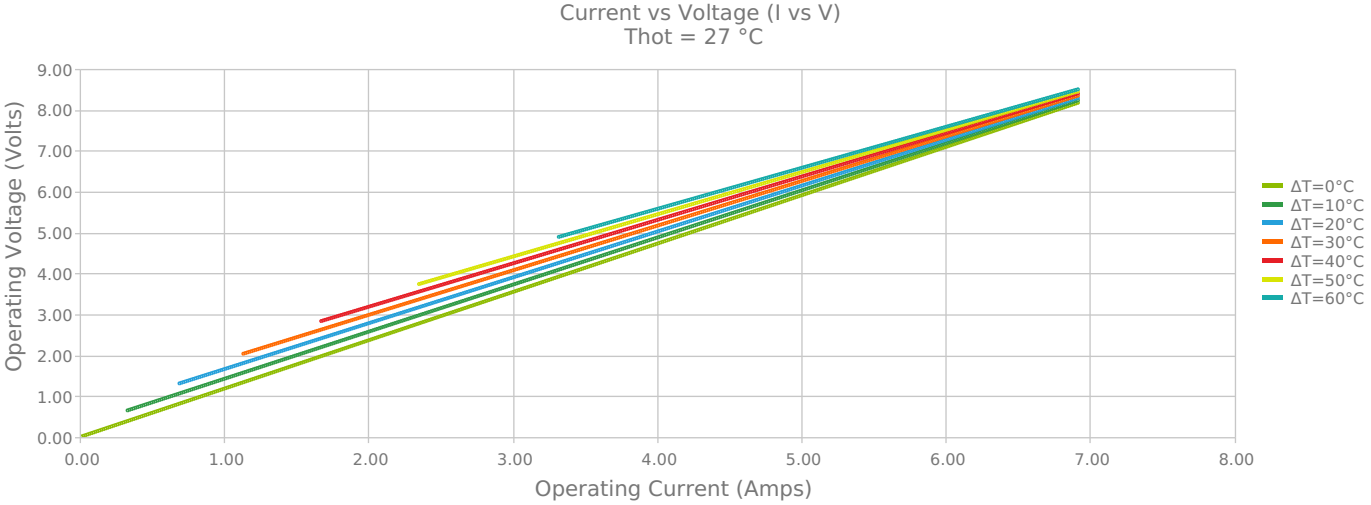


CERAMIC MATERIAL: Al_2O_3
SOLDER CONSTRUCTION: 138°C, BiSn
INCHES [MM]
Note: Allow 0.020 in [0.5 mm] around perimeter of the thermoelectric cooler and lead wire attachment to accommodate sealant

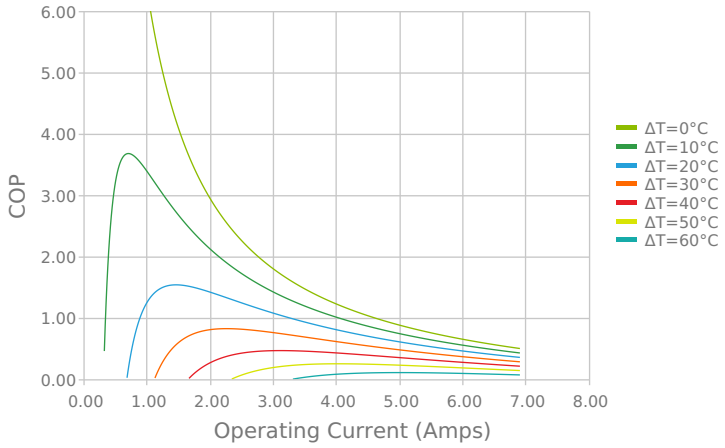
ELECTRICAL AND THERMAL PERFORMANCE



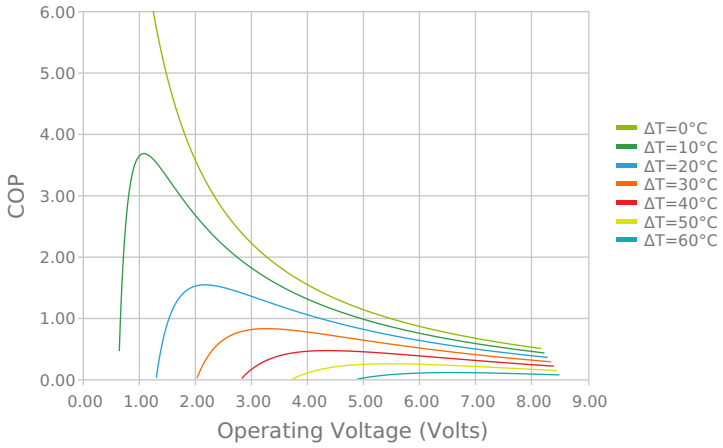




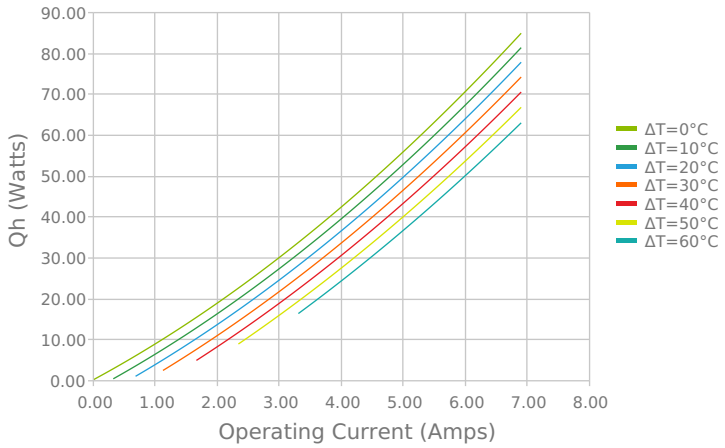
Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C



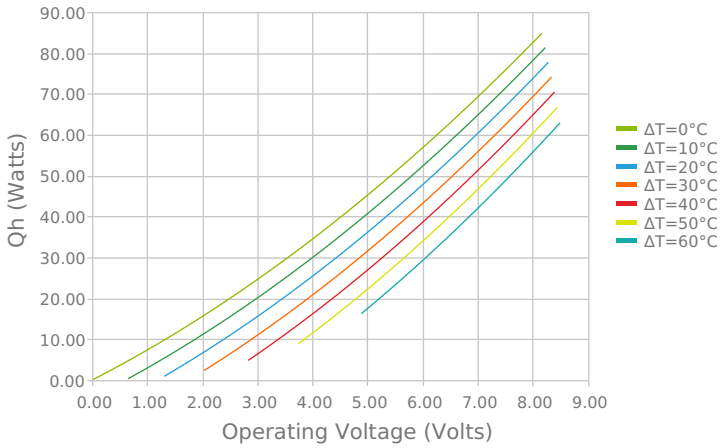
Coefficient of Performance (COP = Qc/Pin)
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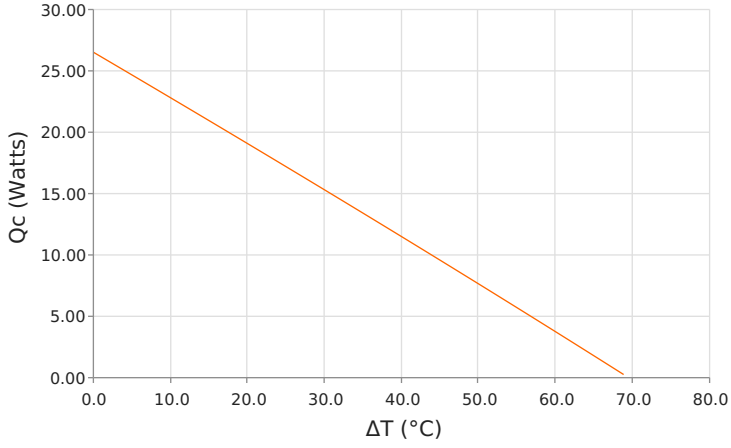
Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C



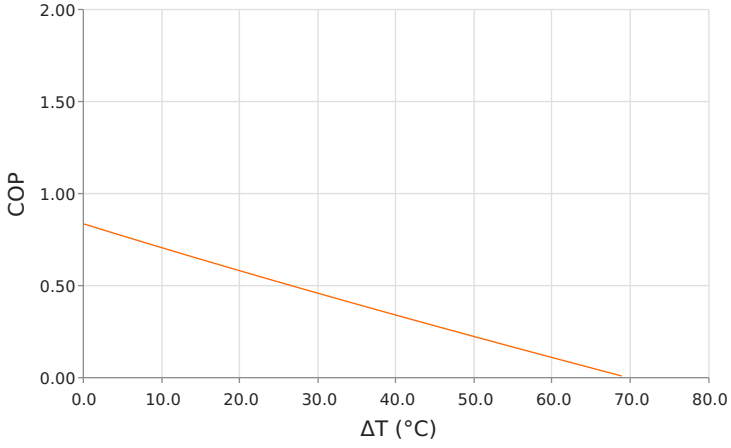
Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C



Heat Pumped at Cold Side (Qc)
Thot = 27 °C | Current = 5.2 Amps



Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C | Current = 5.2 Amps



SPECIFICATIONS*

Hot Side Temperature	27.0 °C	35.0 °C	50.0 °C
Qcmax (ΔT = 0)	28.3 Watts	29.1 Watts	30.6 Watts
ΔTmax (Qc = 0)	70.5°C	73.5°C	78.8°C
Imax (I @ ΔTmax)	6.1 Amps	6.1 Amps	6.0 Amps
Vmax (V @ ΔTmax)	7.8 Volts	8.1 Volts	8.6 Volts
Module Resistance	1.18 Ohms	1.23 Ohms	1.32 Ohms
Max Operating Temperature	80 °C		
Weight	15.0 gram(s)		

* Specifications reflect thermoelectric coefficients updated March 2020

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
TB	3.861 ±0.013 mm 0.152 ± 0.0005 in	0.013 mm / 0.013 mm 0.0005 in / 0.0005 in	Lapped	Lapped	152.4 mm 6.00 in

SEALING OPTIONS

Suffix	Sealant	Color	Temp Range	Description
RT	RTV	Translucent or White	-60 to 204°C	Non-corrosive, silicone adhesive

NOTES

1. Max operating temperature: 80°C
2. Do not exceed Imax or Vmax when operating module
3. Reference assembly guidelines for recommended installation

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