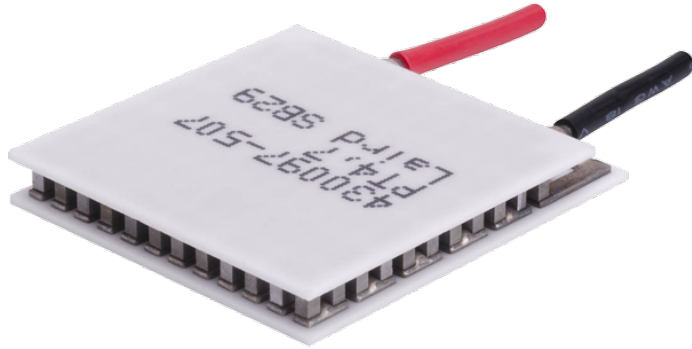


**PolarTEC™ PT Series Thermoelectric Cooler**

The PT4-7-F2-3030-TA-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  $Q_c$  of 17.8 Watts when  $\Delta T = 0$  and a maximum  $\Delta T$  of 70.5 °C at  $Q_c = 0$ .

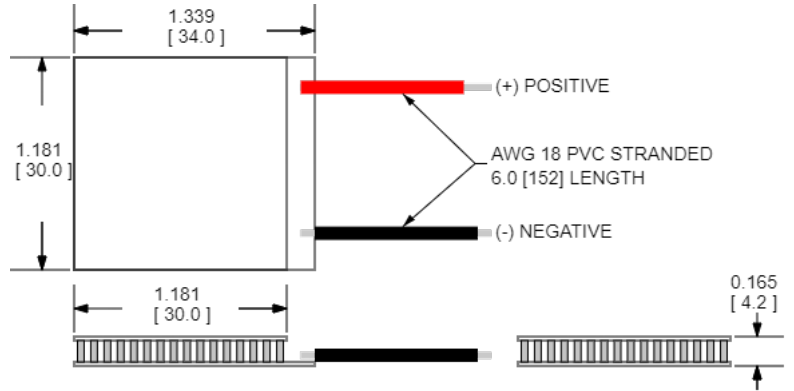


**Features**

- 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

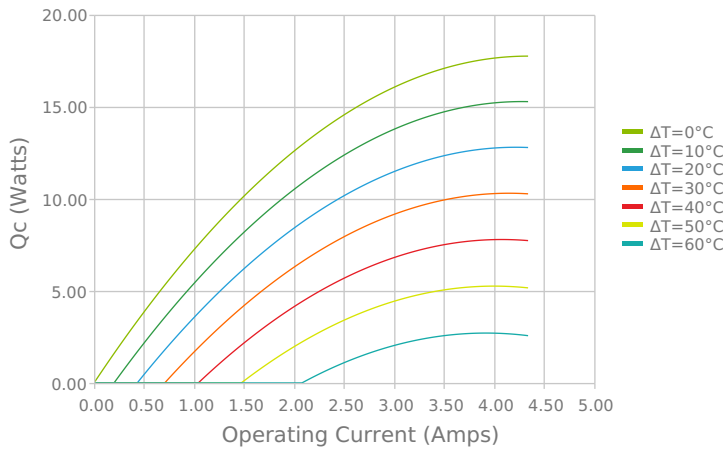


CERAMIC MATERIAL:  $Al_2O_3$   
SOLDER CONSTRUCTION: 138°C, BiSn

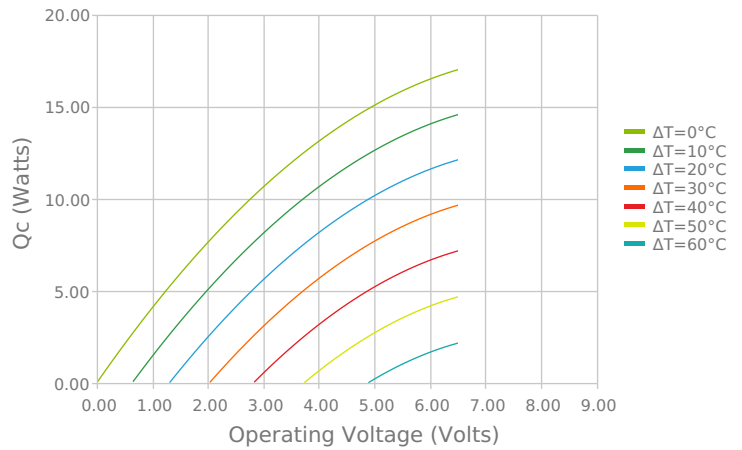
INCHES [MM]

**ELECTRICAL AND THERMAL PERFORMANCE**

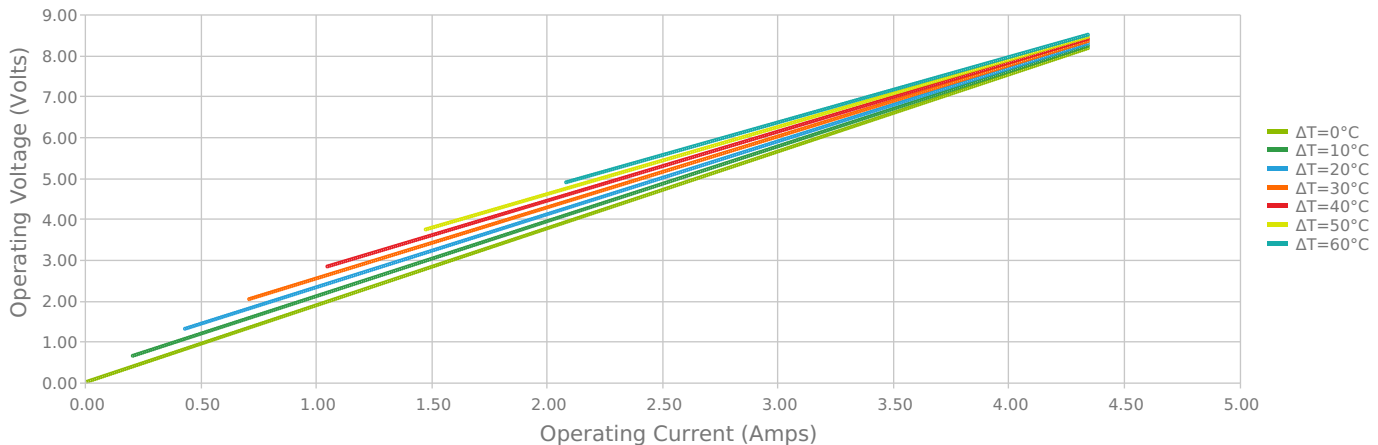
Heat Pumped at Cold Side  
 $Thot = 27\text{ °C}$



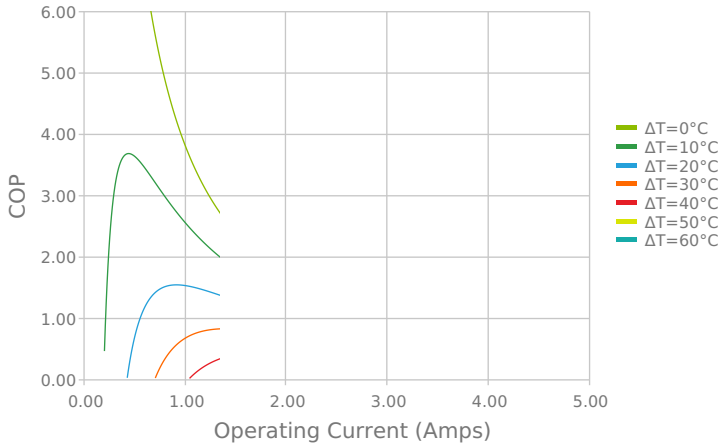
Heat Pumped at Cold Side  
 $Thot = 27\text{ °C}$



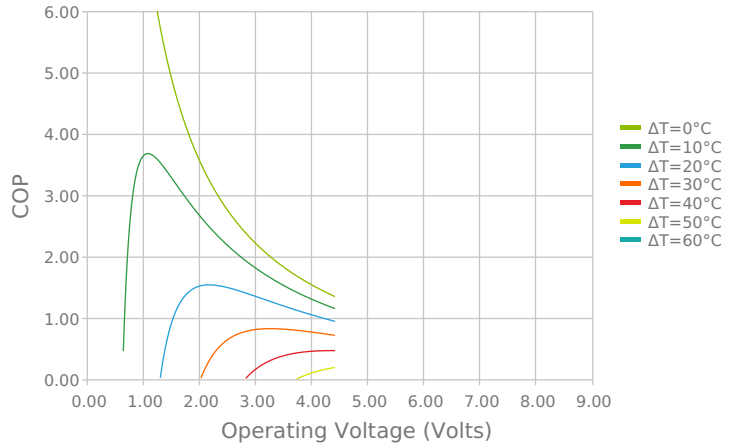
Current vs Voltage (I vs V)  
 $Thot = 27\text{ °C}$



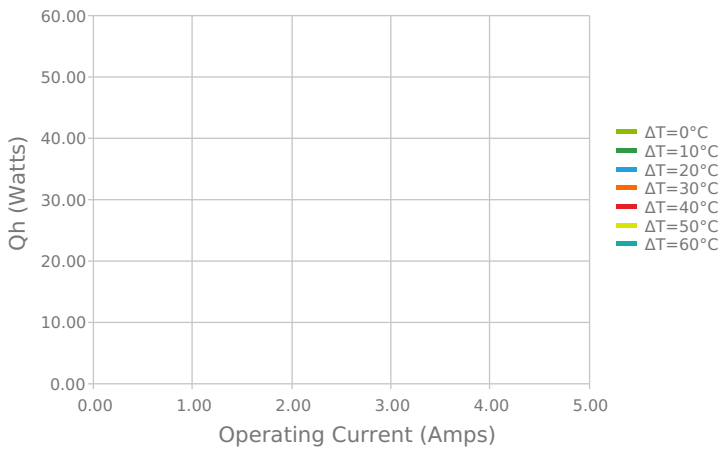
Coefficient of Performance (COP = Qc/Pin)  
 Thot = 27 °C



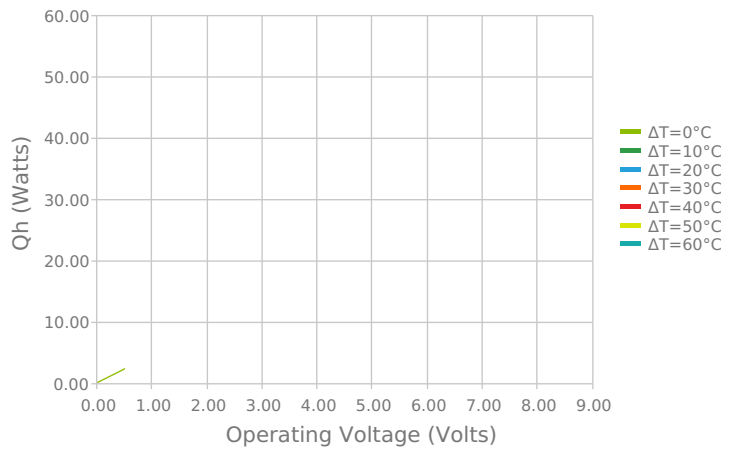
Coefficient of Performance (COP = Qc/Pin)  
 Thot = 27 °C



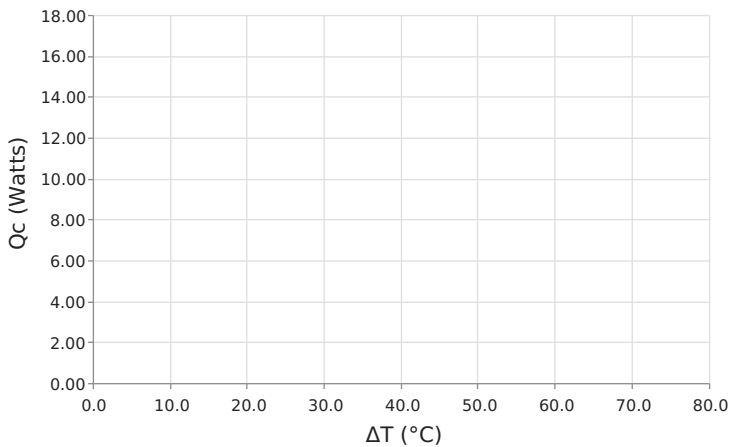
Total Heat Dissipated at Hot Side (Qh=Qc+Pin)  
 Thot = 27 °C



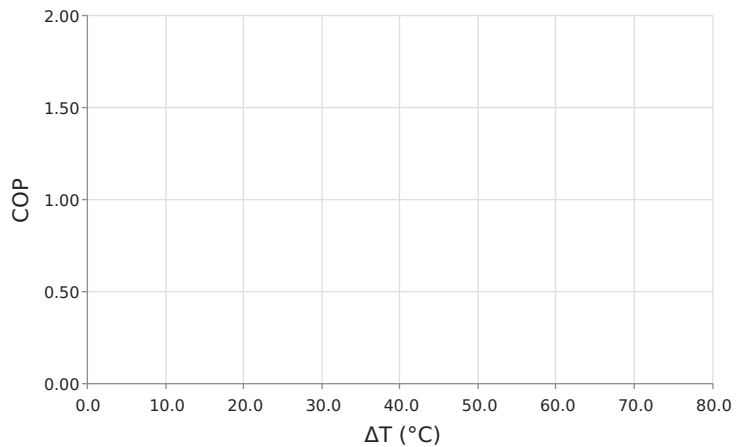
Total Heat Dissipated at Hot Side (Qh=Qc+Pin)  
 Thot = 27 °C



Heat Pumped at Cold Side (Qc)  
 Thot = 27 °C | Current = 3.3 Amps



Coefficient of Performance (COP = Qc/Pin)  
 Thot = 27 °C | Current = 3.3 Amps



## SPECIFICATIONS\*

Hot Side Temperature	27.0 °C	35.0 °C	50.0 °C
<b>Qcmax (<math>\Delta T = 0</math>)</b>	17.8 Watts	18.3 Watts	19.2 Watts
<b><math>\Delta T_{max}</math> (<math>Q_c = 0</math>)</b>	70.5°C	73.5°C	78.8°C
<b>I<sub>max</sub> (I @ <math>\Delta T_{max}</math>)</b>	3.8 Amps	3.8 Amps	3.8 Amps
<b>V<sub>max</sub> (V @ <math>\Delta T_{max}</math>)</b>	7.8 Volts	8.1 Volts	8.6 Volts
<b>Module Resistance</b>	1.88 Ohms	1.96 Ohms	2.11 Ohms
<b>Max Operating Temperature</b>	80 °C		
<b>Weight</b>	13.0 gram(s)		

\* Specifications reflect thermoelectric coefficients updated March 2020

## FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
TA	4.191 ±0.025 mm 0.165 ± 0.0010 in	0.025 mm / 0.025 mm 0.001 in / 0.001 in	Lapped	Lapped	152.4 mm 6.00 in

## SEALING OPTIONS

Suffix	Sealant	Color	Temp Range	Description
	None			No sealing specified

## NOTES

1. Max operating temperature: 80°C
2. Do not exceed I<sub>max</sub> or V<sub>max</sub> when operating module
3. Reference assembly guidelines for recommended installation

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Date: 06/03/2021