

**UltraTEC™ UT Series Thermoelectric Cooler**

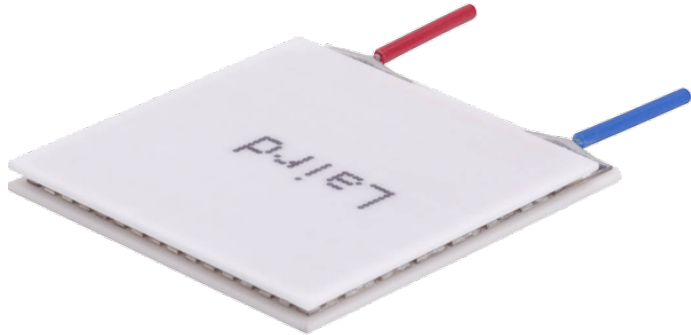
**Note: This product is not recommended for new designs.**

This product series has been replaced with the UltraTEC UTX Series product offering.

The recommended replacement is:

MFG Part Number: 387004695

Description: UTX8-12-F2-3030-TA-EP-W6

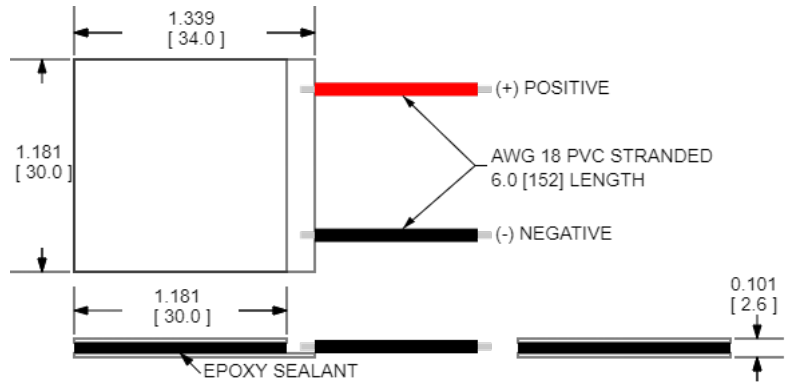


**Features**

- High heat pump density
- Precise temperature control
- Reliable solid-state operation
- No sound or vibration
- DC operation
- RoHS-compliant

**Applications**

- Thermoelectric Coolers and Assemblies for Medical Applications
- Thermoelectric Coolers for Handheld Cosmetic Lasers
- Industrial Laser Cooling
- Peltier Cooling for Digital Light Processors



CERAMIC MATERIAL: Al<sub>2</sub>O<sub>3</sub>

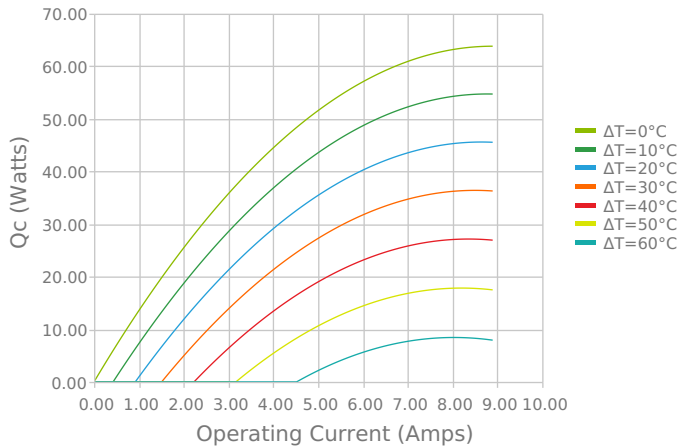
SOLDER CONSTRUCTION: 138°C, BiSn

INCHES [ MM ]

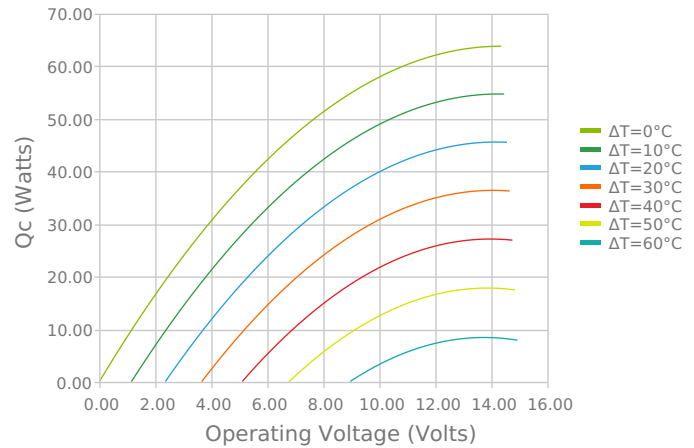
Note: Allow 0.020 in [0.5 mm] around perimeter of the thermoelectric cooler and lead wire attachment to accommodate sealant

**ELECTRICAL AND THERMAL PERFORMANCE**

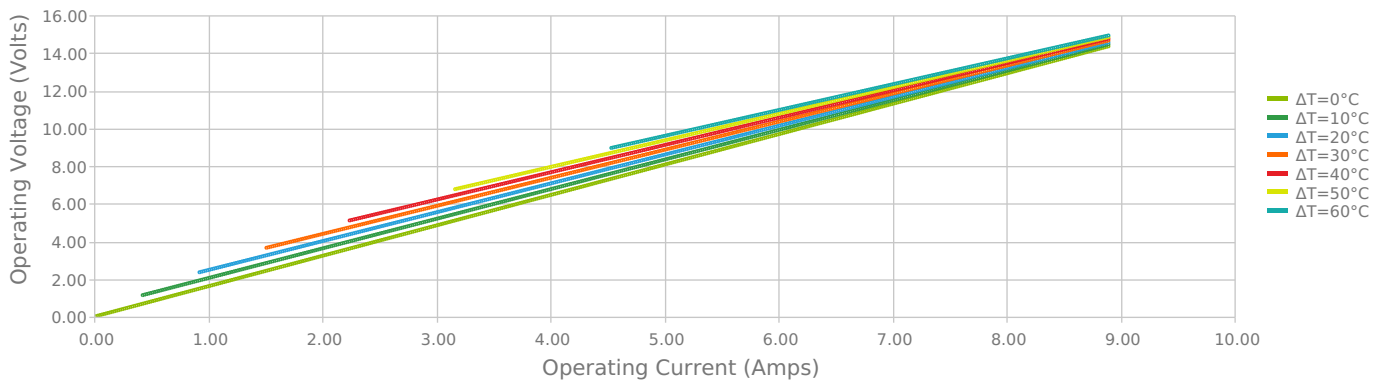
Heat Pumped at Cold Side  
Thot = 27 °C



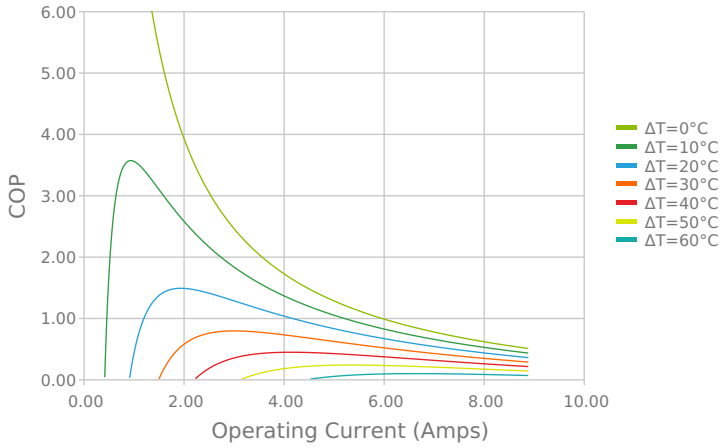
Heat Pumped at Cold Side  
Thot = 27 °C



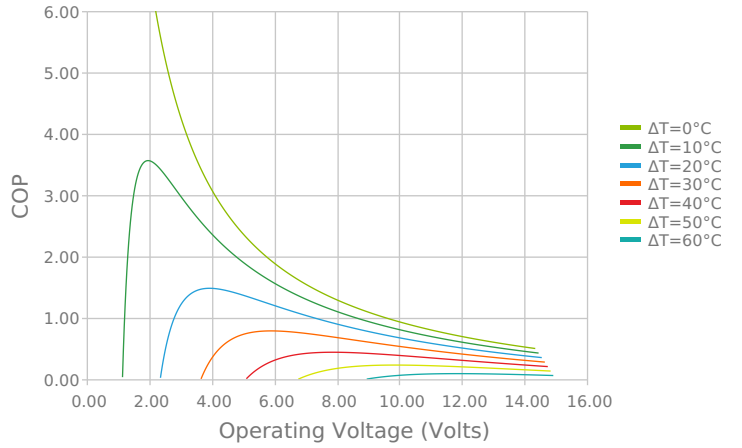
Current vs Voltage (I vs V)  
Thot = 27 °C



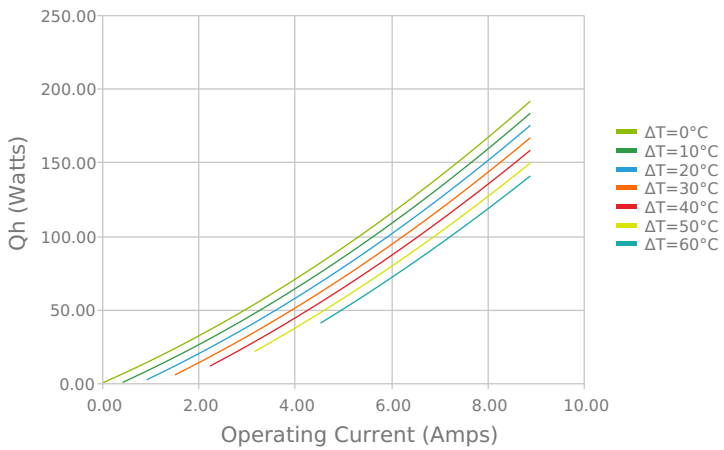
Coefficient of Performance (COP = Qc/Pin)  
Thot = 27 °C



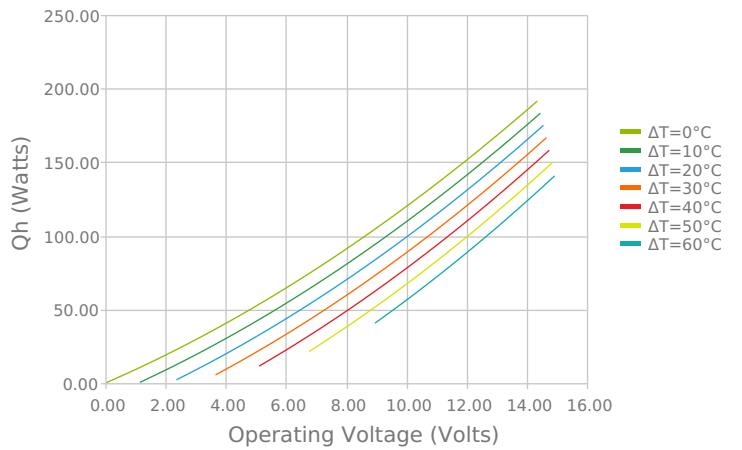
Coefficient of Performance (COP = Qc/Pin)  
Thot = 27 °C



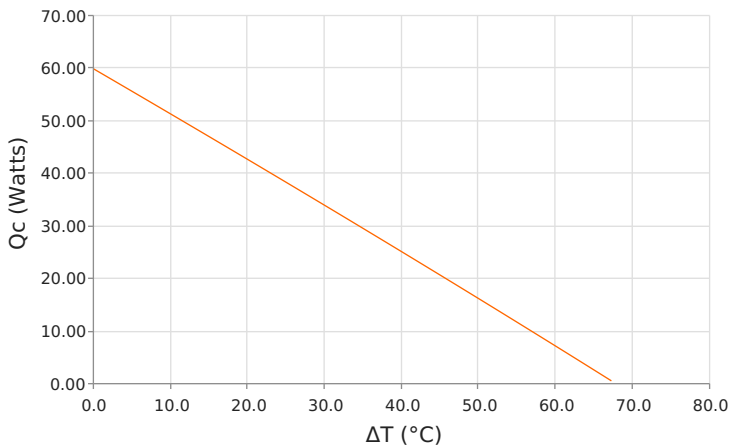
Total Heat Dissipated at Hot Side (Qh=Qc+Pin)  
Thot = 27 °C



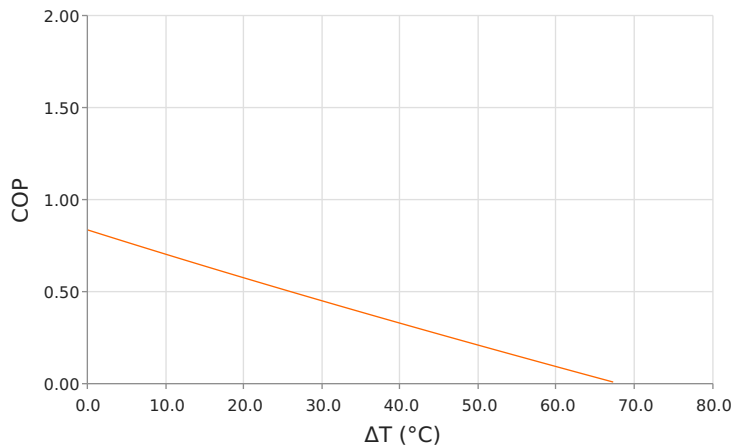
Total Heat Dissipated at Hot Side (Qh=Qc+Pin)  
Thot = 27 °C



Heat Pumped at Cold Side (Qc)  
Thot = 27 °C | Current = 6.7 Amps



Coefficient of Performance (COP = Qc/Pin)  
Thot = 27 °C | Current = 6.7 Amps



## SPECIFICATIONS\*

### Hot Side Temperature

### Qcmax ( $\Delta T = 0$ )

### $\Delta T_{max}$ ( $Q_c = 0$ )

### I<sub>max</sub> (I @ $\Delta T_{max}$ )

### V<sub>max</sub> (V @ $\Delta T_{max}$ )

### Module Resistance

### Max Operating Temperature

### Weight

	27.0 °C	35.0 °C	50.0 °C
Qcmax ( $\Delta T = 0$ )	63.8 Watts	65.8 Watts	69.2 Watts
$\Delta T_{max}$ ( $Q_c = 0$ )	68.9°C	71.8°C	77.0°C
I <sub>max</sub> (I @ $\Delta T_{max}$ )	7.9 Amps	7.8 Amps	7.8 Amps
V <sub>max</sub> (V @ $\Delta T_{max}$ )	13.6 Volts	14.2 Volts	15.1 Volts
Module Resistance	1.61 Ohms	1.68 Ohms	1.81 Ohms
Max Operating Temperature	80 °C		
Weight	11.0 gram(s)		

\* Specifications reflect thermoelectric coefficients updated March 2020

## FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
TA	2.565 ±0.025 mm 0.101 ± 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
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<sub>max</sub> or V<sub>max</sub> when operating module
3. Reference assembly guidelines for recommended installation

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