UltraTEC™ UT Series UT15-12-F2-4040-TB-RT-W10
MFG Part Number: 430764-519
Legacy Product

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: 387004684

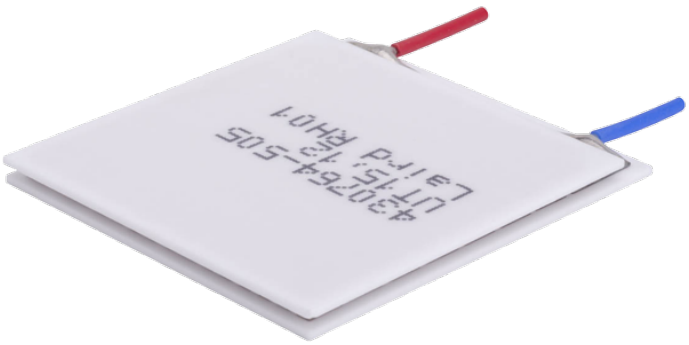
Description: UTX15-12-F2-4040-TB-RT-W10

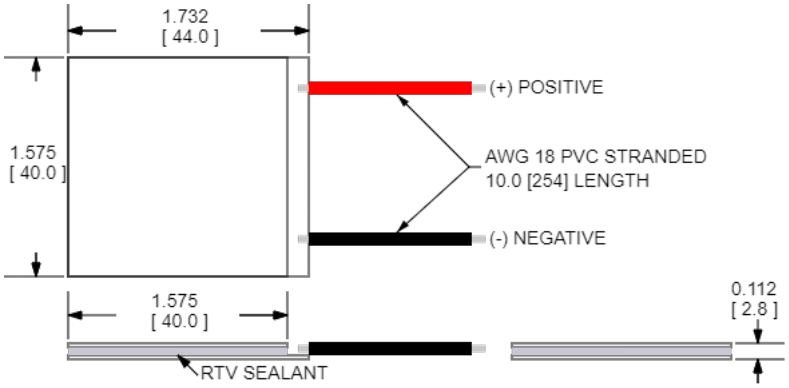
Features

- 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





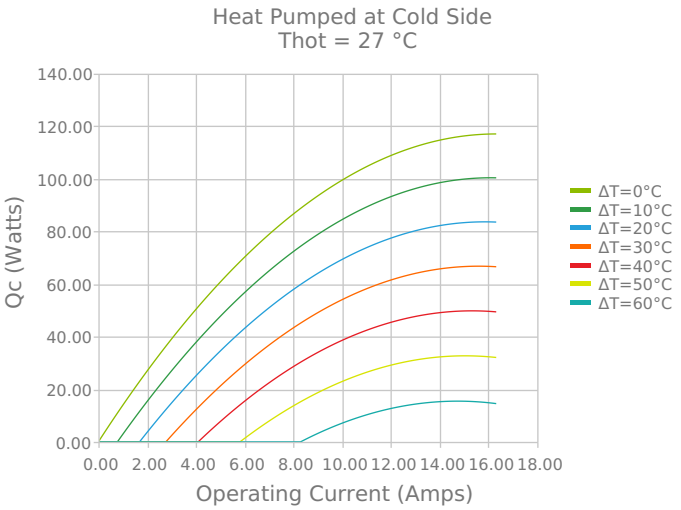
CERAMIC MATERIAL: Al_2O_3

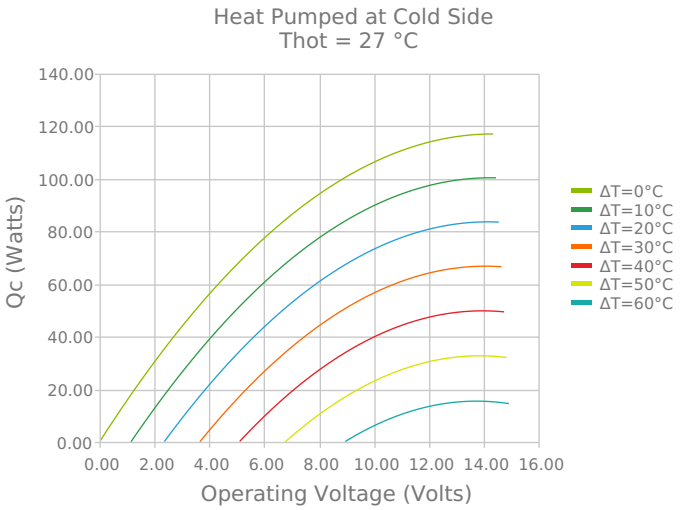
SOLDER CONSTRUCTION: 138°C, BiSn

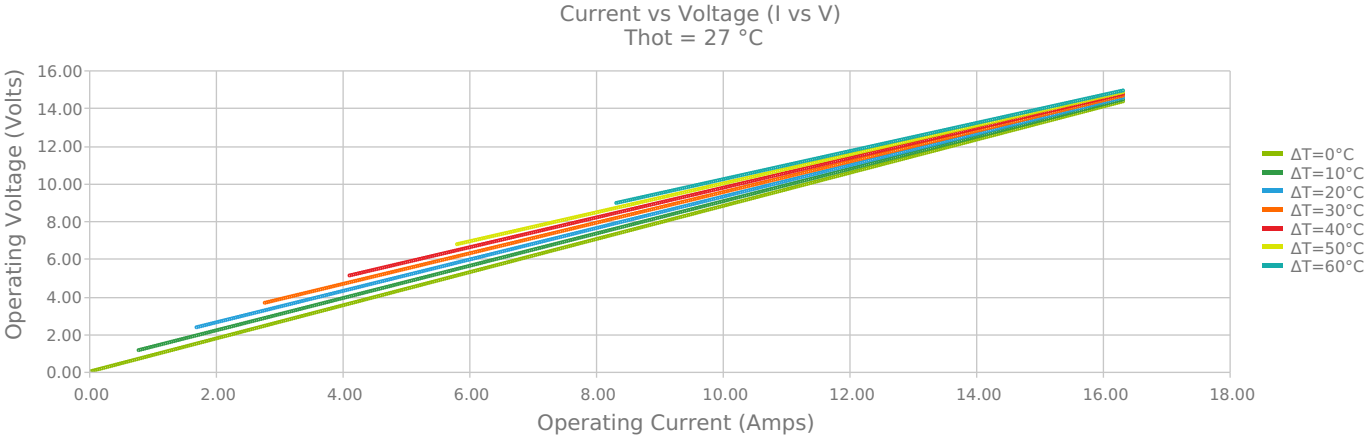
INCHES [MM]

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

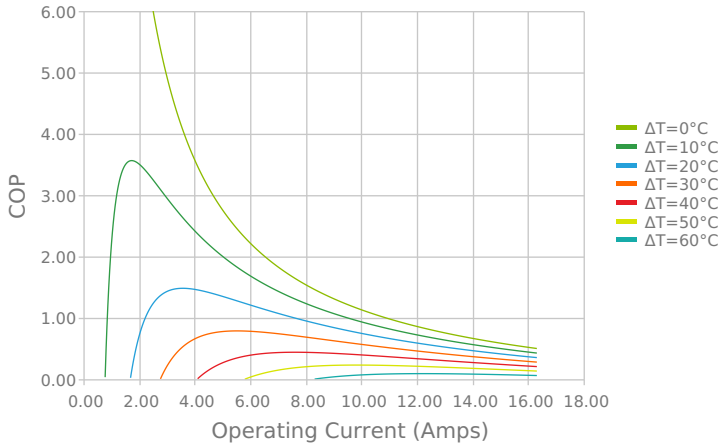
ELECTRICAL AND THERMAL PERFORMANCE







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



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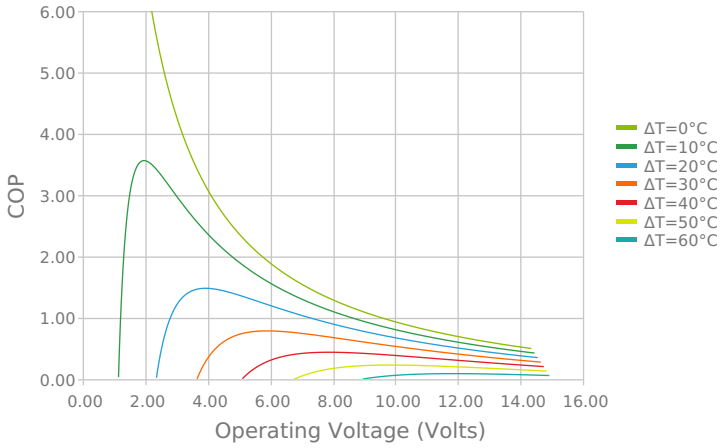
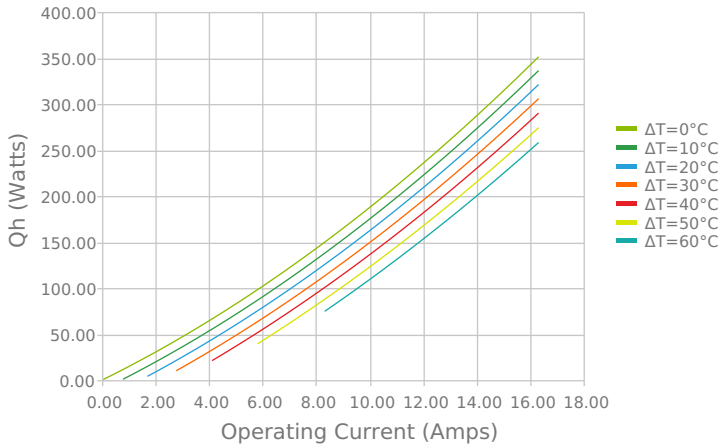


Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C



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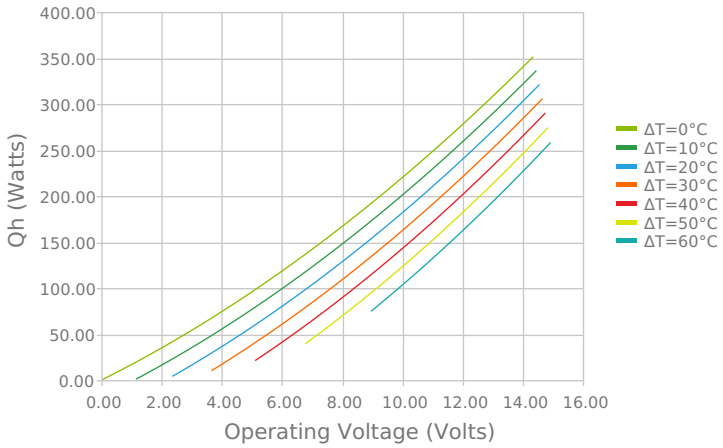
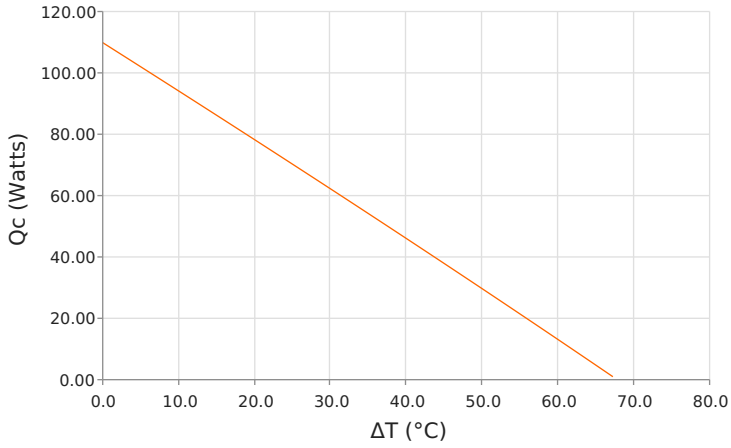
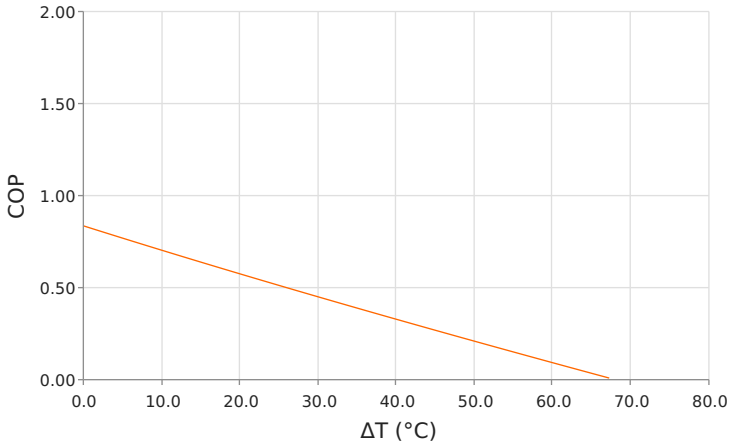


Heat Pumped at Cold Side (Qc)
Thot = 27 °C | Current = 12.2 Amps



Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C | Current = 12.2 Amps



SPECIFICATIONS*

Hot Side Temperature	27.0 °C	35.0 °C	50.0 °C
Qcmax (ΔT = 0)	117.1 Watts	120.7 Watts	126.9 Watts
ΔTmax (Qc = 0)	68.9°C	71.8°C	77.0°C
Imax (I @ ΔTmax)	14.4 Amps	14.4 Amps	14.2 Amps
Vmax (V @ ΔTmax)	13.6 Volts	14.2 Volts	15.1 Volts
Module Resistance	0.88 Ohms	0.92 Ohms	0.98 Ohms
Max Operating Temperature	80 °C		
Weight	20.0 gram(s)		

* Specifications reflect thermoelectric coefficients updated March 2020

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
TB	2.845 ±0.013 mm 0.112 ± 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

Date: 01/08/2022