UltraTEC™ UT Series UT15-288-F2-5252-TA-W6
MFG Part Number: 430857-500

Legacy Product

UltraTEC™ UT Series Thermoelectric Cooler

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

The recommended replacement is:

MFG Part Number: 387004692

Description: UTX15-288-F2-5252-TA-W6

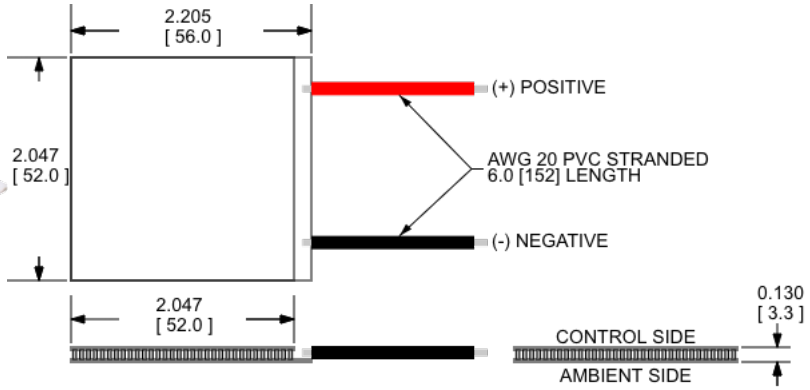
The UT15-288-F2-5252-TA-W6 is a high heat flux density thermoelectric cooler. The thermoelectric module is assembled with a large number of semiconducting thermoelectric couples to achieve a higher heat pumping capacity than standard single stage thermoelectric coolers. It has a maximum Qc of 278.5 Watts when ΔT = 0 and a maximum ΔT of 68.9 °C at Qc = 0.

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

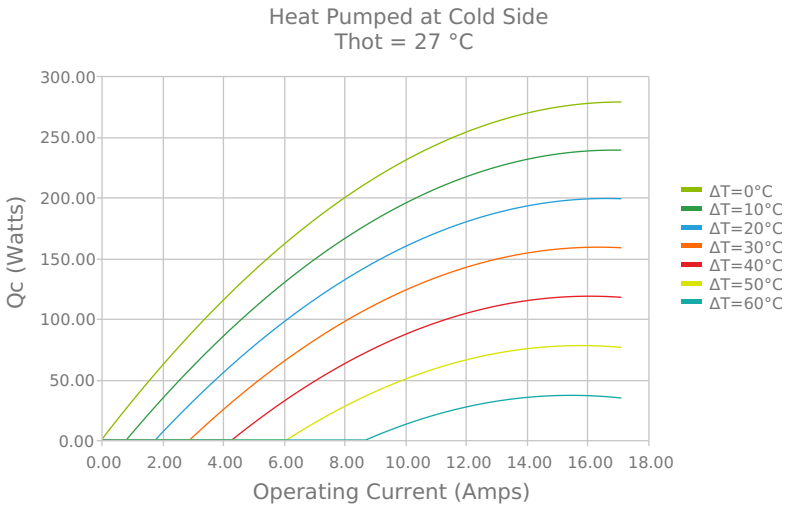


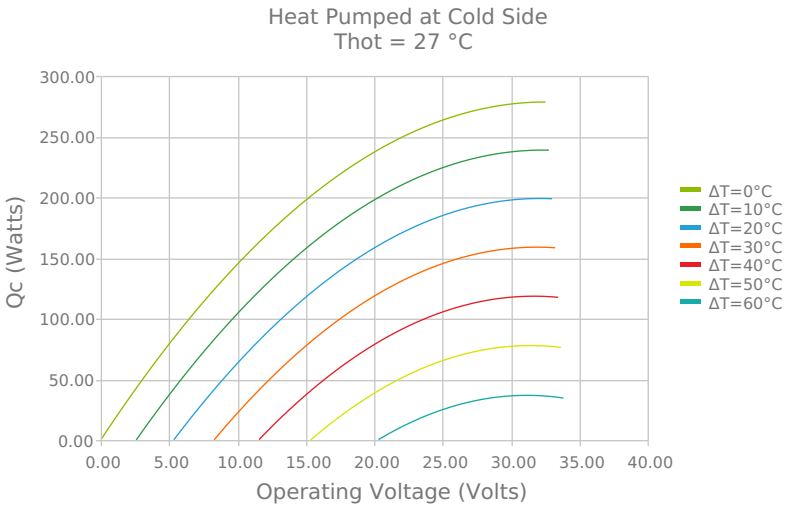
CERAMIC MATERIAL: Al_2O_3
SOLDER CONSTRUCTION: 138°C, BiSn

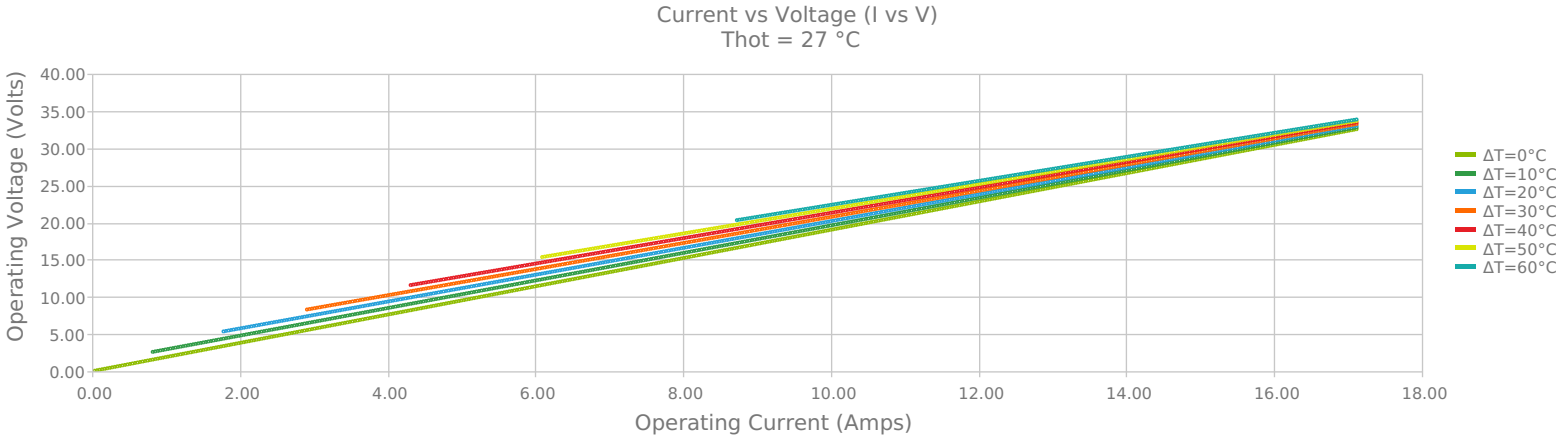
INCHES [MM]

Electrical and Thermal Performance

For maximum performance, be sure to orient the CONTROL side of the TEC against the application to be managed and the AMBIENT side against the heat sink or other heat rejection method. The CONTROL side is always opposite the side with lead attachments. Lead attachment is a passive heat loss and less impactful if located on the side that attaches to the heat exchanger.







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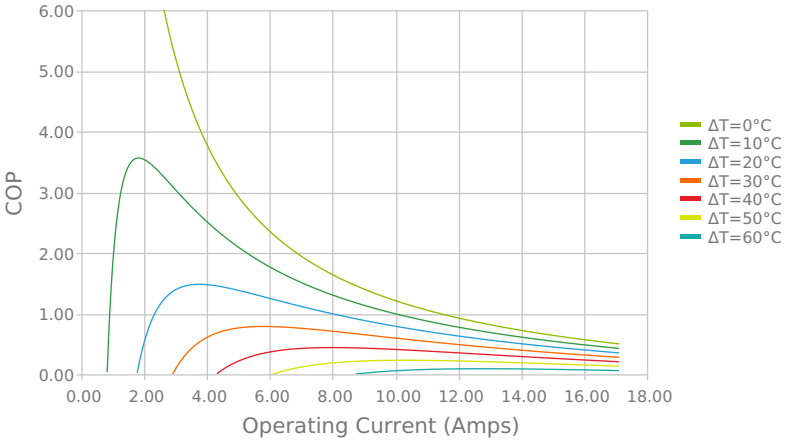
Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C



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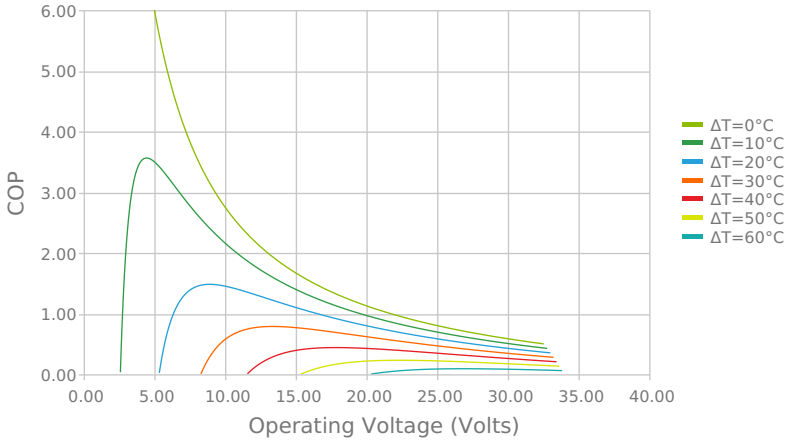
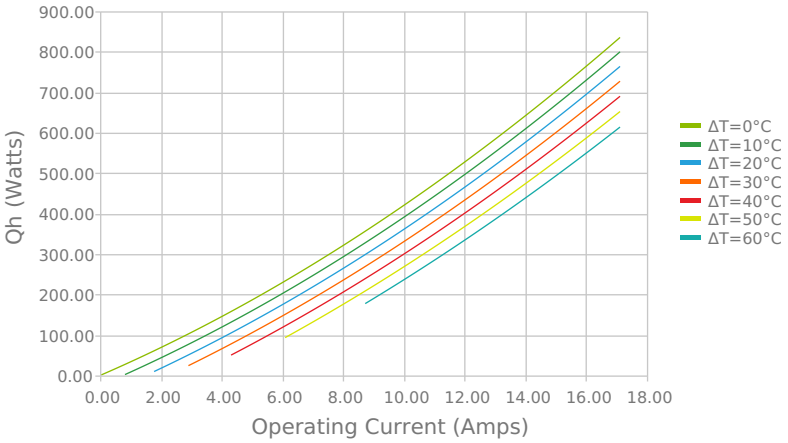


Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C



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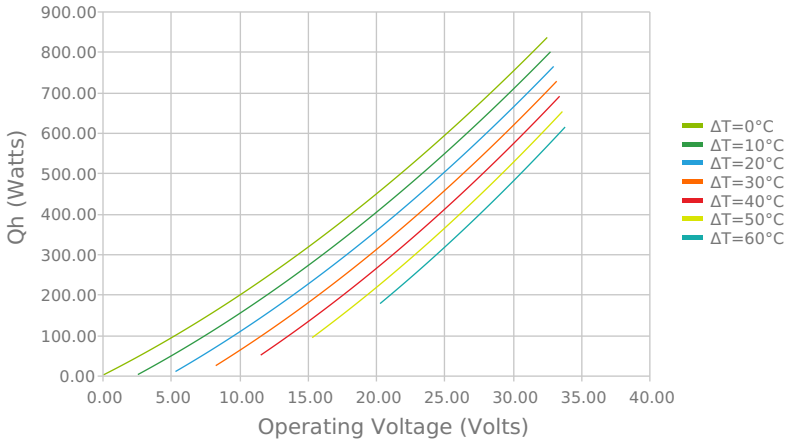
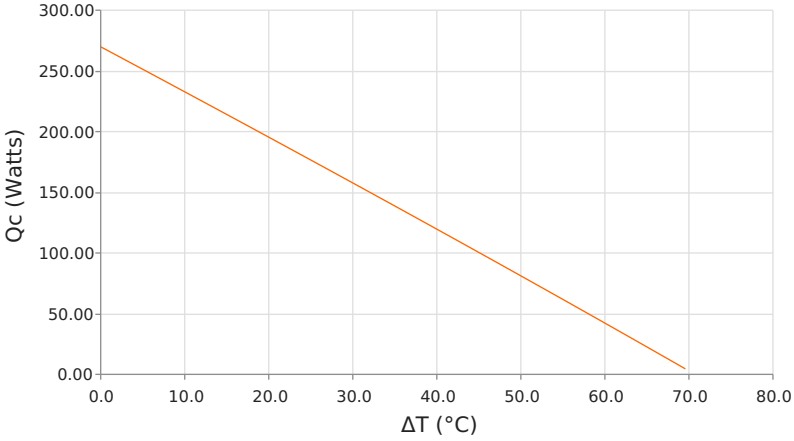
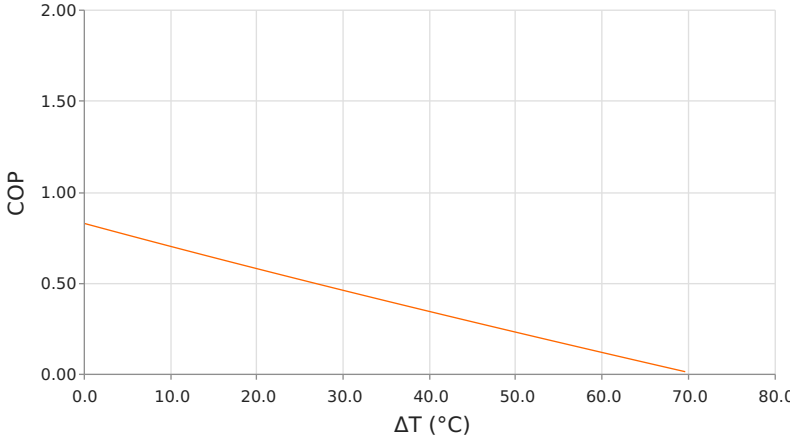


Heat Pumped at Cold Side (Qc)
Thot = 35 °C | Ioperating = 12.9 Amps



Coefficient of Performance (COP = Qc/Pin)
Thot = 35 °C | Ioperating = 12.9 Amps



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Specifications

Hot Side Temperature	27.0 °C	35.0 °C	50.0 °C
Qcmax (ΔT = 0)	278.5 Watts	287.0 Watts	301.9 Watts
ΔTmax (Qc = 0)	68.9°C	71.8°C	77.0°C
Imax (I @ ΔTmax)	15.2 Amps	15.1 Amps	14.9 Amps
Vmax (V @ ΔTmax)	30.9 Volts	32.1 Volts	34.3 Volts
Module Resistance	1.90 Ohms	1.98 Ohms	2.13 Ohms
Max Operating Temperature	80 °C		
Weight	53.0 gram(s)		

Finishing Options

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
TA	3.300 ±0.025 mm 0.130 ± 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

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

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