

UltraTEC™ UTX Series Thermoelectric Cooler

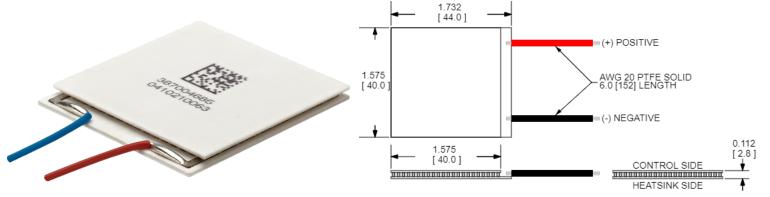
The UTX15-12-F2-4040-TA-W6 is a high-performance thermoelectric cooler that is assembled with advanced thermoelectric materials and can boost cooling capacity by up to 10%. The UltraTEC UTX Series features a higher thermal insulating barrier when compared to standard materials creating a maximum temperature differential (ΔT) of 71.7 °C at Qc = 0. It has a maximum Qc of 125.7 Watts when ΔT = 0.

Features

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

Applications

- Spot Cooling for Industrial Lasers & Optics
- Thermoelectric Cooling for Projection Lasers

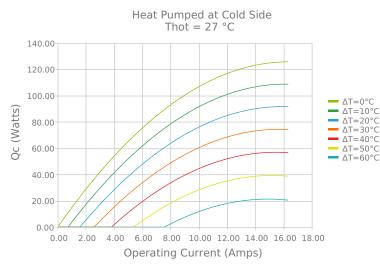


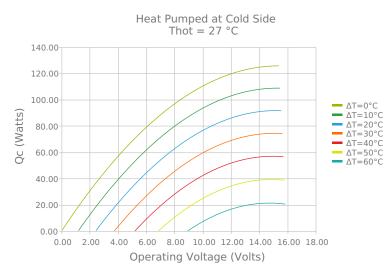
CERAMIC MATERIAL: Al₂O₃ SOLDER CONSTRUCTION: 138°C, BiSn

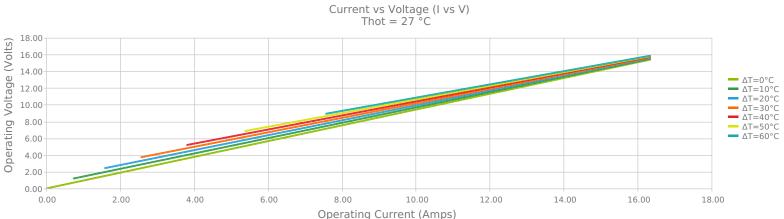
INCHES [MM]

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 HEATSINK 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.



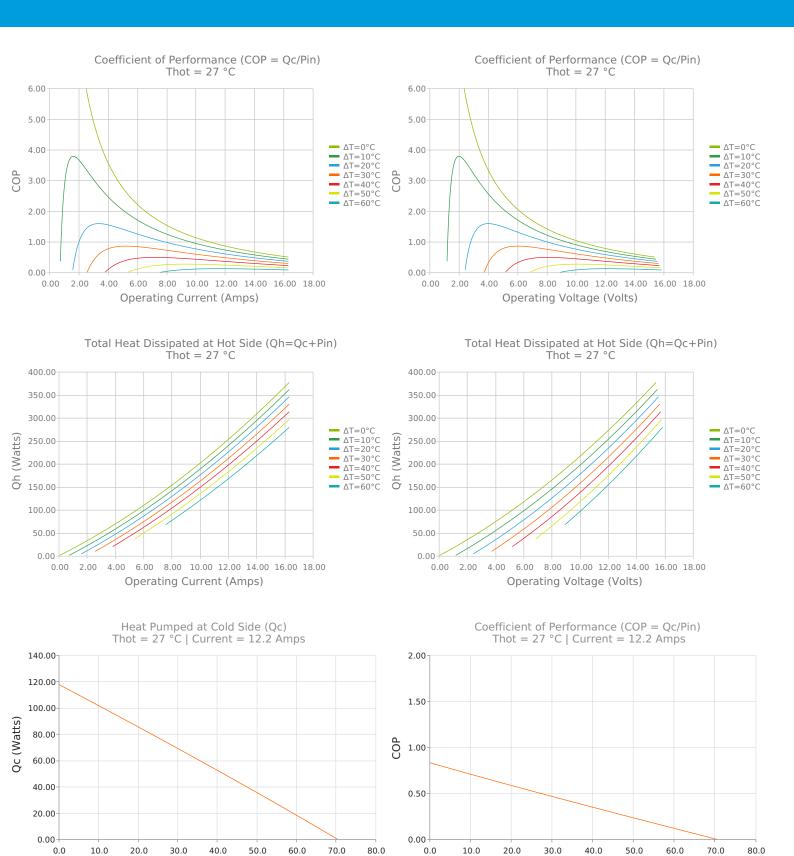




ΔT (°C)



ΔT (°C)





SPECIFICATIONS*

Hot	Side	Temp	erature	
Qcn	nax (<i>L</i>	ΔT = 0)	

 $\Delta T max (Qc = 0)$

Imax (I @ ATmax)

Vmax (V @ \Darmax)

Module Resistance

Max Operating Temperature

Weight

27.0 °C	35.0 °C	50.0 °C
125.7 Watts	129.2 Watts	135.2 Watts
71.7°C	74.8°C	80.4°C
14.6 Amps	14.4 Amps	14.2 Amps
14.6 Volts	15.1 Volts	16.2 Volts
0.94 Ohms	0.98 Ohms	1.06 Ohms
80 °C		
20.0 gram(s)		

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
TA	2.845 ±0.025 mm 0.112 ± 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 Imax or Vmax when operating module
- 3. Reference assembly guidelines for recommended installation
- 4. Recommended to be used with a liquid heat exchanger on the hot side

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^{*} Specifications reflect thermoelectric coefficients updated March 2020