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. The recommended replacement is:

MFG Part Number: 387004708

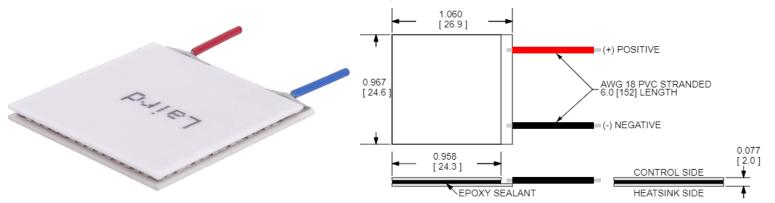
Description: UTX8-12-F2-2525-TA-EP-W6

Features

- High heat pump density
- Precise temperature control
- Reliable solid-state operationNo 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: Al₂O₃

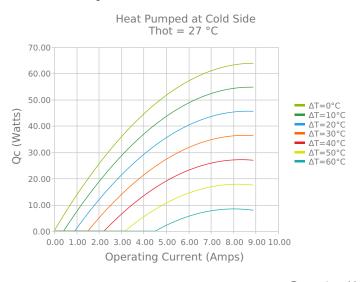
SOLDER CONSTRUCTION: 138°C, BiSn

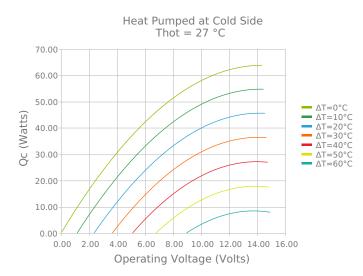
INCHES [MM]

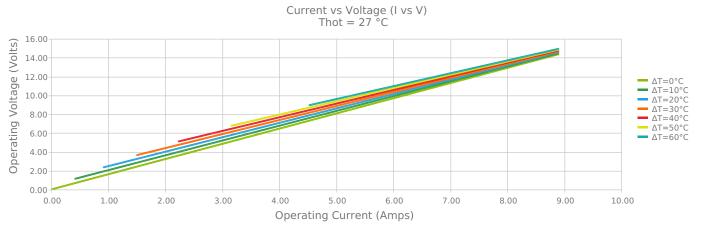
Note: Allow 0.020 in [0.5 mm] around perimeter of the thermoelectric cooler and lead wire attachment to accommodate sealant

ELECTRICAL AND THERMAL PERFORMANCE

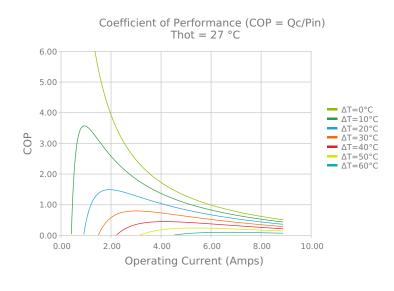
For maximum performance, be sure to orient the CONTROL side of the TEC against the application to be managed and the HEATSINK side against the heat sink or other heat rejection method. The CONTROL side is always opposite the side with lead attachments. Lead attachment is a passive heat loss and less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

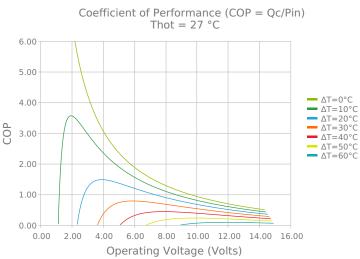


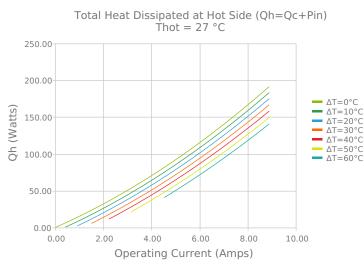


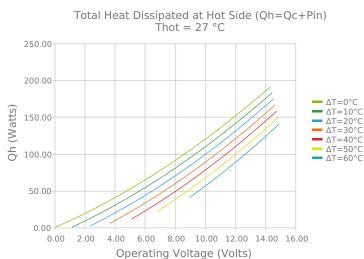


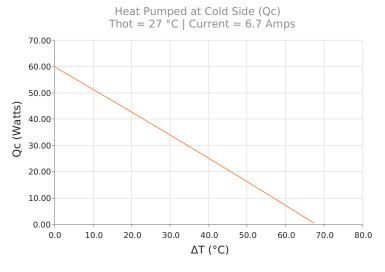


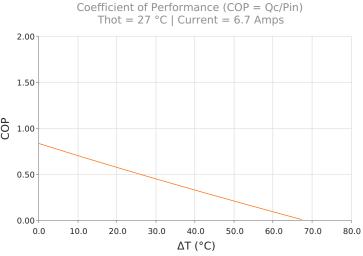














SPECIFICATIONS*

Hot Side Temperature

 $Qcmax (\Delta T = 0)$

 $\Delta T max (Qc = 0)$

Imax (I @ ATmax)

Vmax (V @ Δ Tmax)

Module Resistance

Max Operating Temperature

Weight

27.0 °C	35.0 °C	50.0 °C
63.8 Watts	65.8 Watts	69.2 Watts
68.9°C	71.8°C	77.0°C
7.9 Amps	7.8 Amps	7.8 Amps
13.6 Volts	14.2 Volts	15.1 Volts
1.61 Ohms	1.68 Ohms	1.81 Ohms
80 °C		
7.0 gram(s)		

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
ТА	1.956 ±0.025 mm 0.077 ± 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	Ероху	Black	-55 to 150°C	Low density syntactic foam epoxy encapsulant

NOTES

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

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^{*} Specifications reflect thermoelectric coefficients updated March 2020