HiTemp ET Series ET8-12-F2-2525-TA-RT-W6
MFG Part Number: 387001823

HiTemp ET Series Thermoelectric Cooler

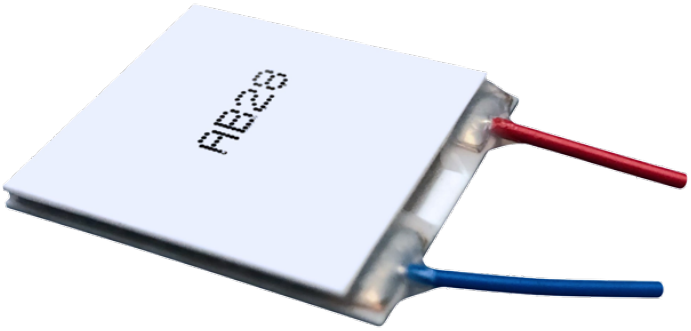
The ET8-12-F2-2525-TA-RT-W6 high temperature thermoelectric cooler uses Laird Thermal Systems' enhanced Thermoelectric Module construction preventing performance degrading diffusion, which is common in standard grade thermoelectric coolers operating in high temperature environments exceeding 80 °C. It has a maximum Qc of 70.5 Watts when ΔT = 0 and a maximum ΔT of 77.9 °C at Qc = 0.

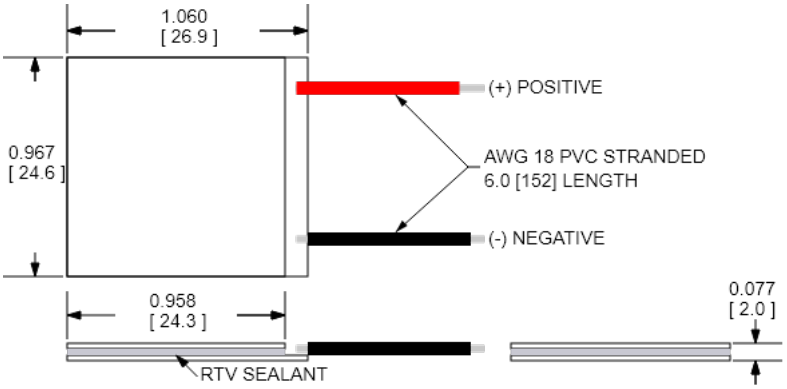
Features

- High-temperature operation
- Reliable solid-state
- No sound or vibration
- Environmentally-friendly
- RoHS-compliant

Applications

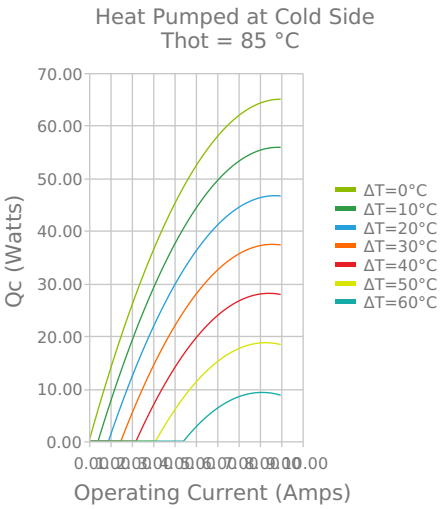
- Peltier Cooling for Refrigerated Centrifuges
- Peltier Cooling for Machine Vision
- Thermoelectric Cooling for CMOS Sensors
- Cooling Solutions for Autonomous Systems
- Peltier Cooling for Digital
- Light Processors

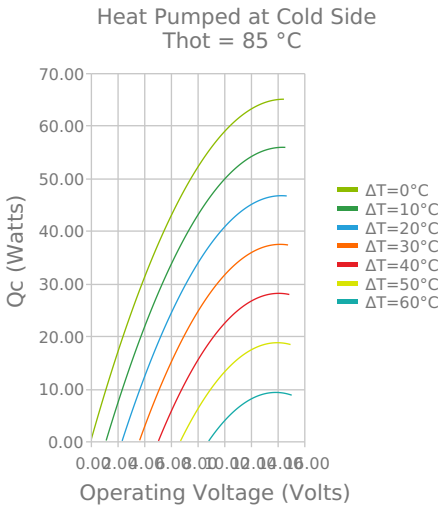


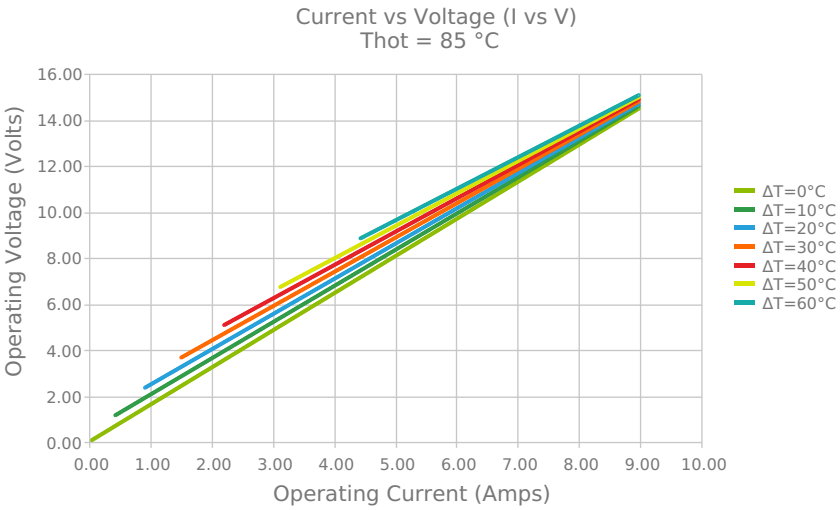


CERAMIC MATERIAL: Al_2O_3
SOLDER CONSTRUCTION: 232°C, SbSn
INCHES [MM]
Note: Allow 0.020 in [0.5 mm] around perimeter of the thermoelectric cooler and lead wire attachment to accommodate sealant

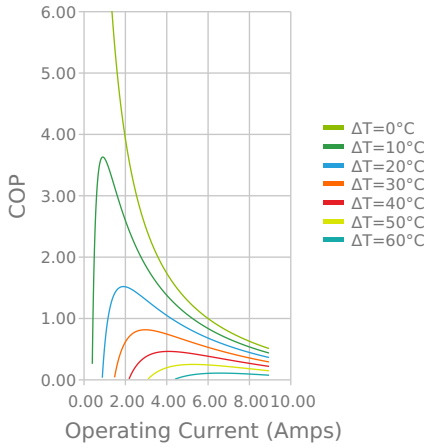
ELECTRICAL AND THERMAL PERFORMANCE






Current vs Voltage (I vs V)
Thot = 85 °C
Operating Voltage (Volts)
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
Operating Current (Amps)
ΔT=0°C
ΔT=10°C
ΔT=20°C
ΔT=30°C
ΔT=40°C
ΔT=50°C
ΔT=60°C

Coefficient of Performance (COP = Qc/Pin)
Thot = 85 °C



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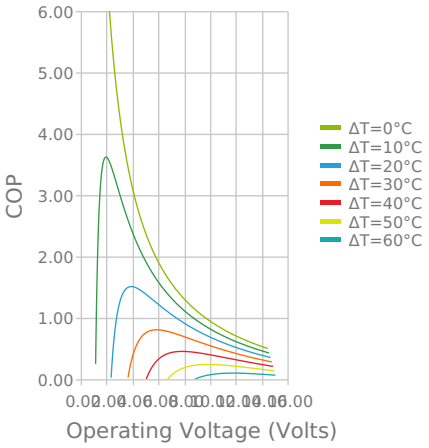
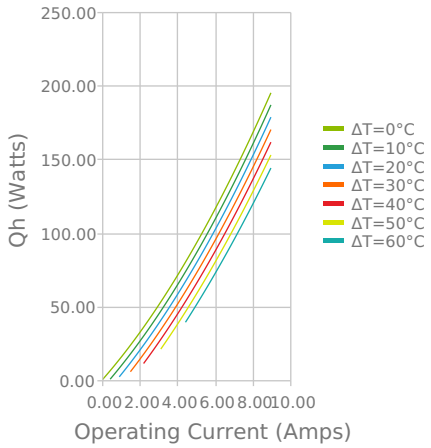


Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 85 °C



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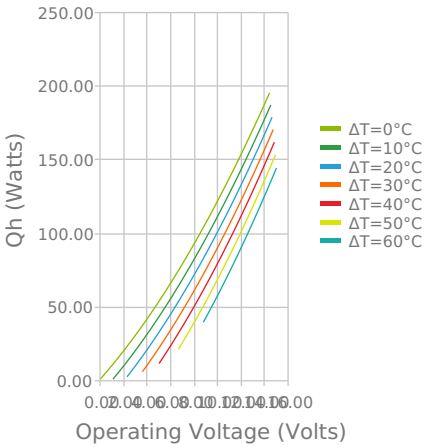
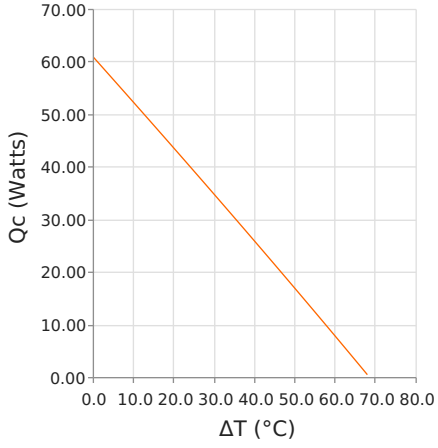
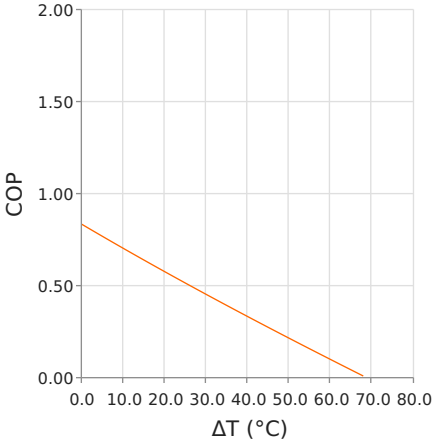


Heat Pumped at Cold Side (Qc)
Thot = 85 °C | Current = 6.7 Amps



Coefficient of Performance (COP = Qc/Pin)
Thot = 85 °C | Current = 6.7 Amps



SPECIFICATIONS*

Hot Side Temperature	50.0 °C	85.0 °C	110.0 °C
Qcmax (ΔT = 0)	70.5 Watts	77.3 Watts	80.7 Watts
ΔTmax (Qc = 0)	77.9°C	89.3°C	96.2°C
Imax (I @ ΔTmax)	7.8 Amps	7.6 Amps	7.5 Amps
Vmax (V @ ΔTmax)	15.3 Volts	17.5 Volts	19.1 Volts
Module Resistance	1.81 Ohms	2.10 Ohms	2.30 Ohms
Max Operating Temperature	150 °C		
Weight	7.0 gram(s)		

* Specifications reflect thermoelectric coefficients updated March 2020

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
11	1.956 ±0.051 mm 0.077 ± 0.002 in	0.051 mm / 0.051 mm 0.002 in / 0.002 in	Lapped	Lapped	50.8 mm 2.00 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: 150°C
2. Do not exceed Imax or Vmax when operating module
3. Reference assembly guidelines for recommended installation

Date: 02/08/2021