HiTemp ETX Series ETX3-12-F2-3030-TA-RT-W6
MFG Part Number: 387004968

HiTemp ETX Series Thermoelectric Cooler

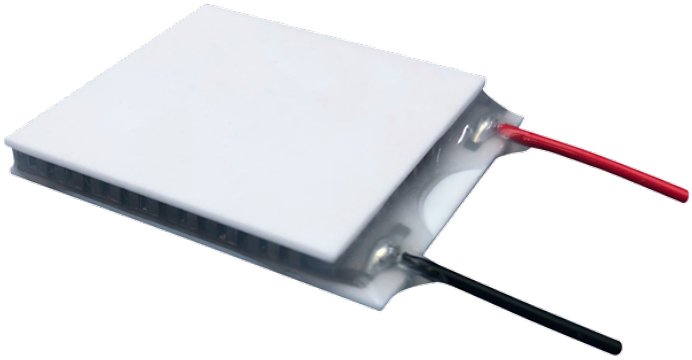
The ETX3-12-F2-3030-TA-RT-W6 high temperature, high-performance thermoelectric cooler uses Laird Thermal Systems' enhanced thermoelectric module construction preventing performance degrading diffusion, which is common in standard grade thermoelectric coolers operating in high temperature environments exceeding 80 °C. It has a maximum Qc of 31.4 Watts when ΔT = 0 and a maximum ΔT of 83.2 °C at Qc = 0.

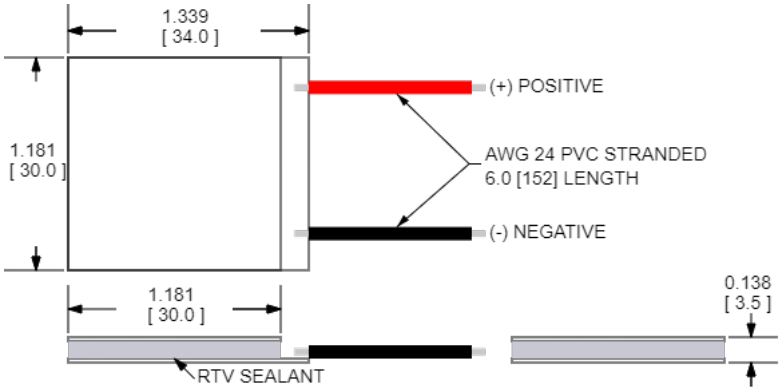
Features

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

Applications

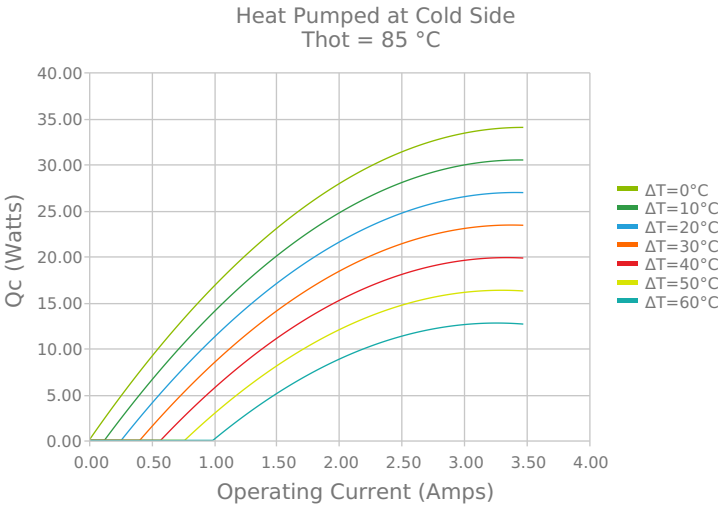
- Peltier Cooling for Refrigerated Centrifuges
- Peltier Cooling for Machine Vision
- Thermoelectric Cooling for CMOS Sensors
- Cooling Solutions for Autonomous Systems
- Peltier Cooling for Digital Light Processors
- Heating and Cooling for Liquid Chromatography Systems
- Thermoelectric Cooling for Security Cameras

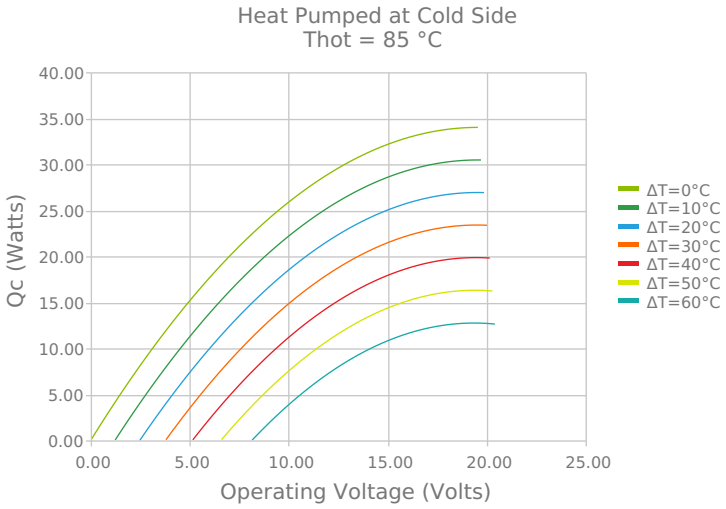


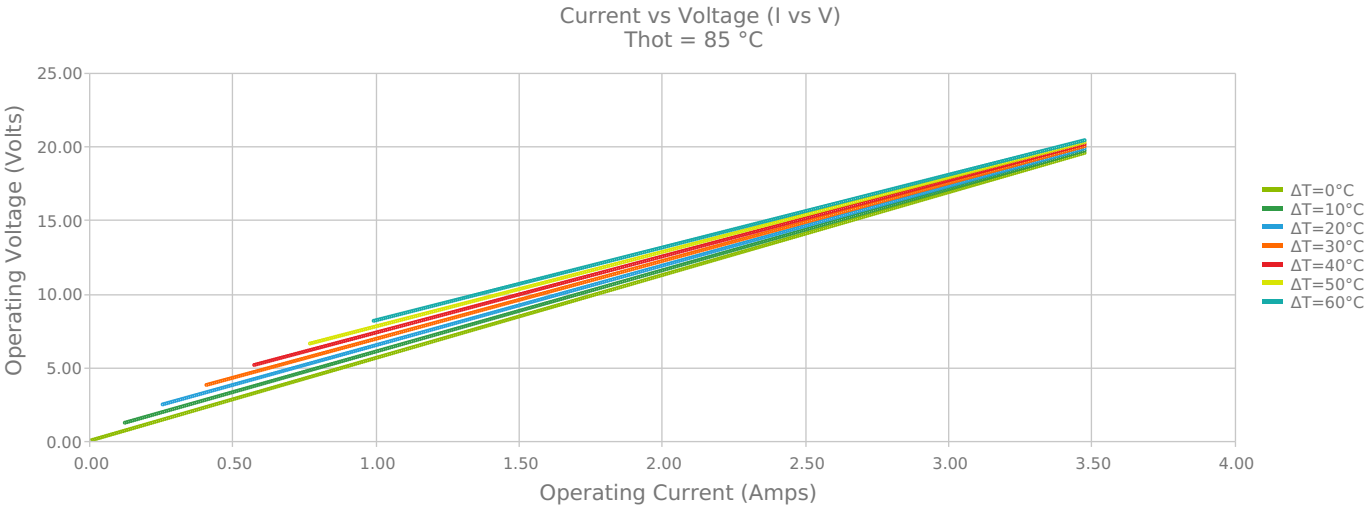


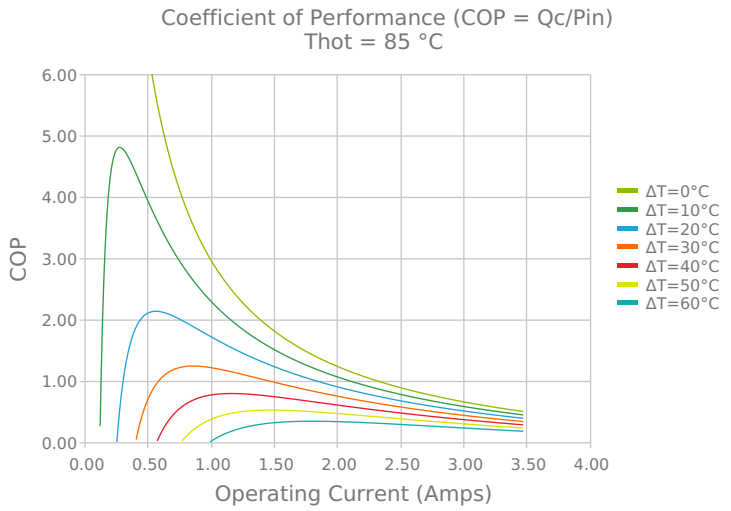
CERAMIC MATERIAL: Al_2O_3
SOLDER CONSTRUCTION: 232°C, SbSn
INCHES [MM]
Note: Allow 0.020 in [0.5 mm] around perimeter of the thermoelectric cooler and lead wire attachment to accommodate sealant

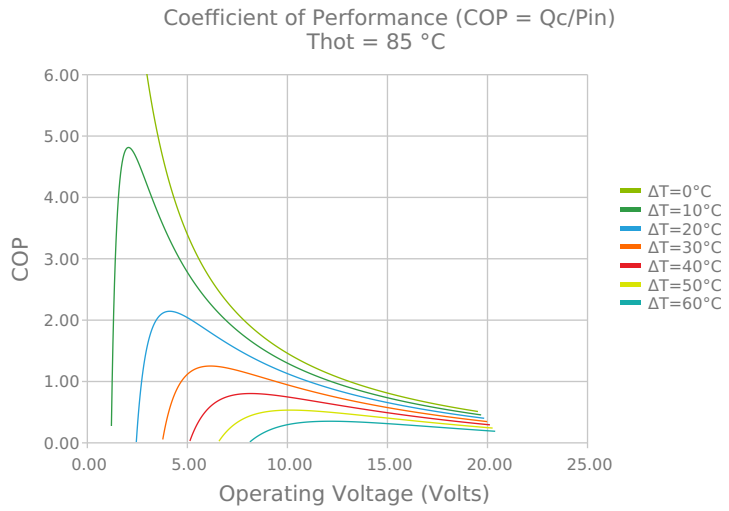
ELECTRICAL AND THERMAL PERFORMANCE

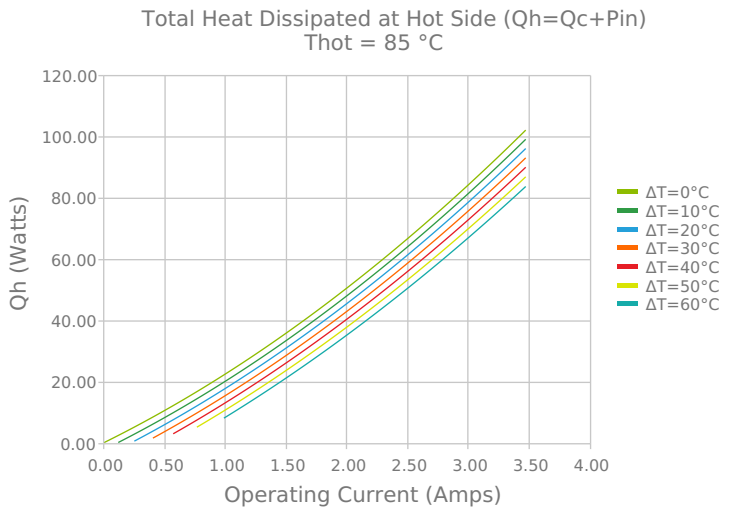


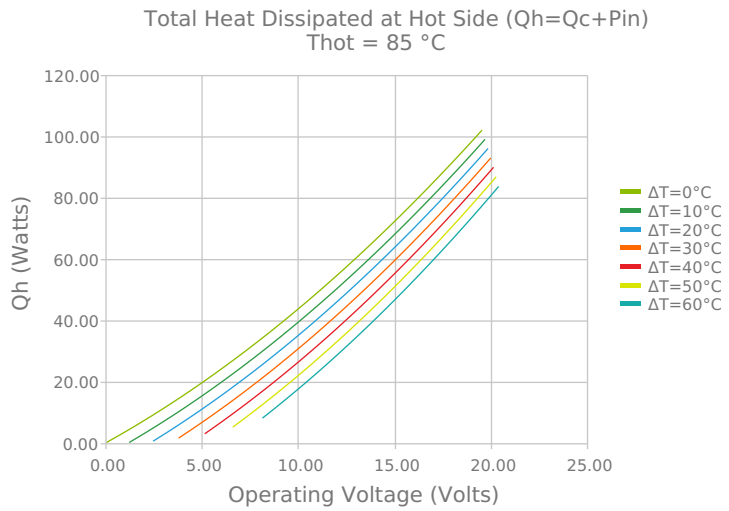


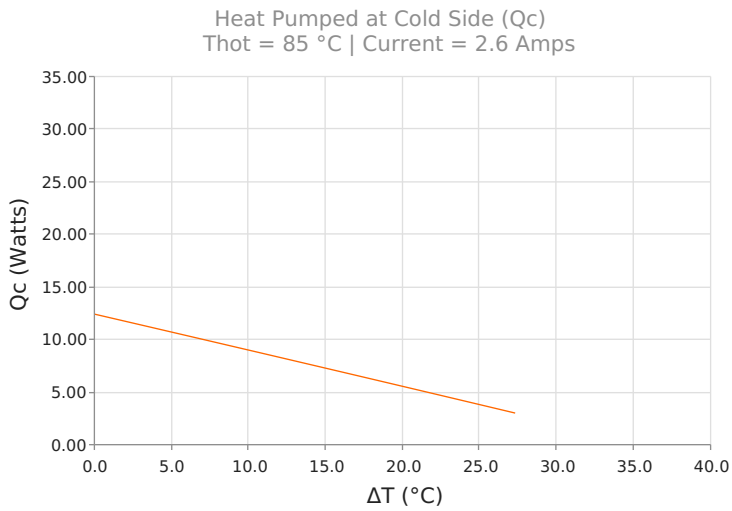


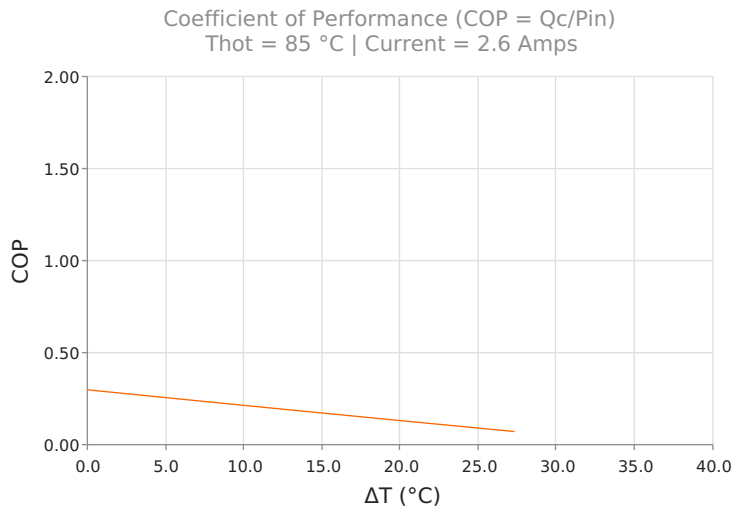

Coefficient of Performance (COP = Qc/Pin)
Thot = 85 °C
COP
Operating Current (Amps)
ΔT=0°C
ΔT=10°C
ΔT=20°C
ΔT=30°C
ΔT=40°C
ΔT=50°C
ΔT=60°C


Coefficient of Performance (COP = Qc/Pin)
Thot = 85 °C
COP
Operating Voltage (Volts)
ΔT=0°C
ΔT=10°C
ΔT=20°C
ΔT=30°C
ΔT=40°C
ΔT=50°C
ΔT=60°C


Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 85 °C
Qh (Watts)
Operating Current (Amps)
ΔT=0°C
ΔT=10°C
ΔT=20°C
ΔT=30°C
ΔT=40°C
ΔT=50°C
ΔT=60°C


Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 85 °C
Qh (Watts)
Operating Voltage (Volts)
ΔT=0°C
ΔT=10°C
ΔT=20°C
ΔT=30°C
ΔT=40°C
ΔT=50°C
ΔT=60°C


Heat Pumped at Cold Side (Qc)
Thot = 85 °C | Current = 2.6 Amps
Qc (Watts)
ΔT (°C)


Coefficient of Performance (COP = Qc/Pin)
Thot = 85 °C | Current = 2.6 Amps
COP
ΔT (°C)

SPECIFICATIONS*

Hot Side Temperature	50.0 °C	85.0 °C	110.0 °C
Qcmax (ΔT = 0)	31.4 Watts	34.0 Watts	35.1 Watts
ΔTmax (Qc = 0)	83.2°C	95.3°C	102.0°C
Imax (I @ ΔTmax)	3.2 Amps	3.1 Amps	3.0 Amps
Vmax (V @ ΔTmax)	16.6 Volts	19.1 Volts	20.8 Volts
Module Resistance	4.82 Ohms	5.62 Ohms	6.16 Ohms
Max Operating Temperature	150 °C		
Weight	9.0 gram(s)		

* Specifications reflect thermoelectric coefficients updated March 2020

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
TA	3.510 ±0.025 mm 0.138 ± 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
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

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