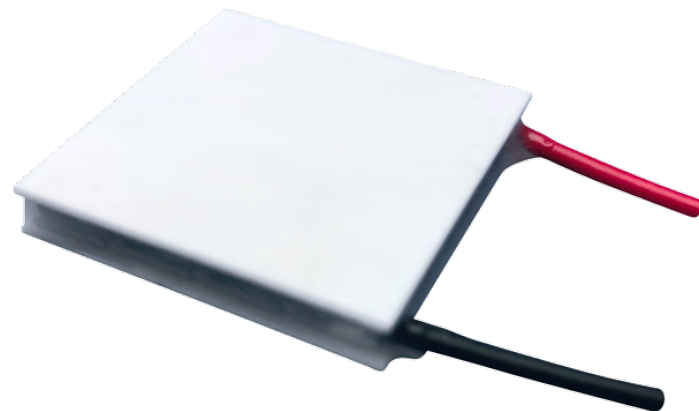


HiTemp ETX Series Thermoelectric Cooler

The ETX14-3-F1-3030-TB-EP-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 Q_c of 33.8 Watts when $\Delta T = 0$ and a maximum ΔT of 83.2 °C at $Q_c = 0$.

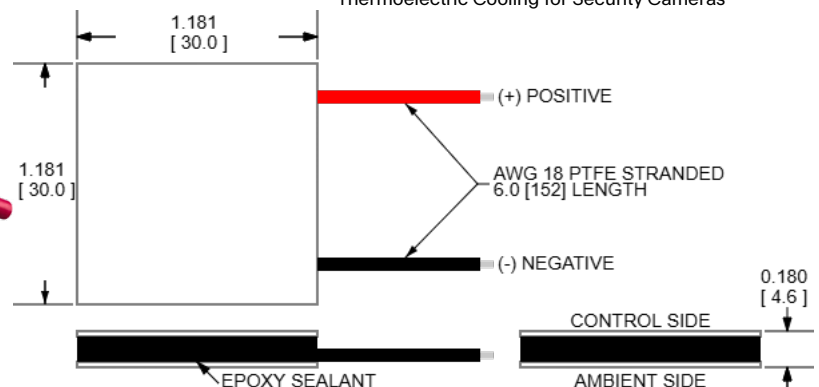


Features

- 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

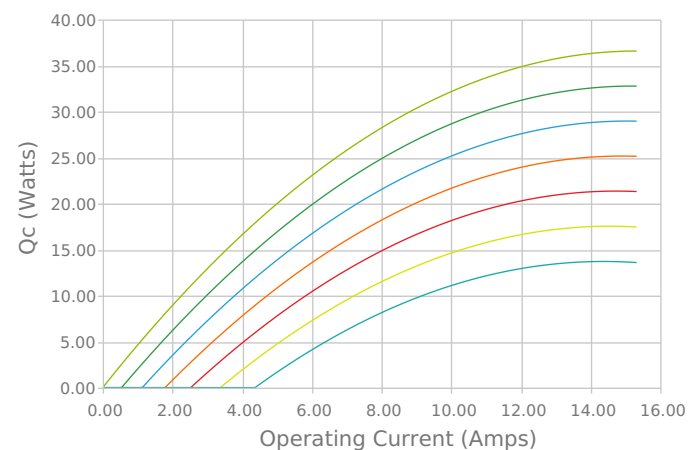
Note: Allow 0.020 in [0.5 mm] around perimeter of the thermoelectric cooler and lead wire attachment to accommodate sealant

INCHES [MM]

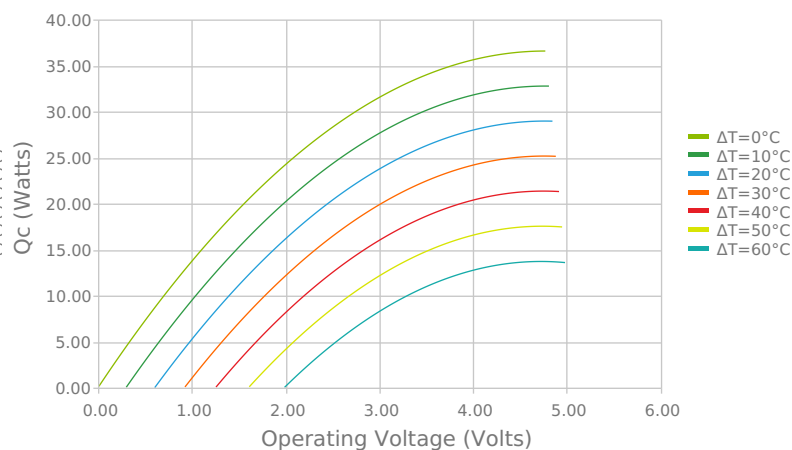
Electrical and Thermal Performance

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.

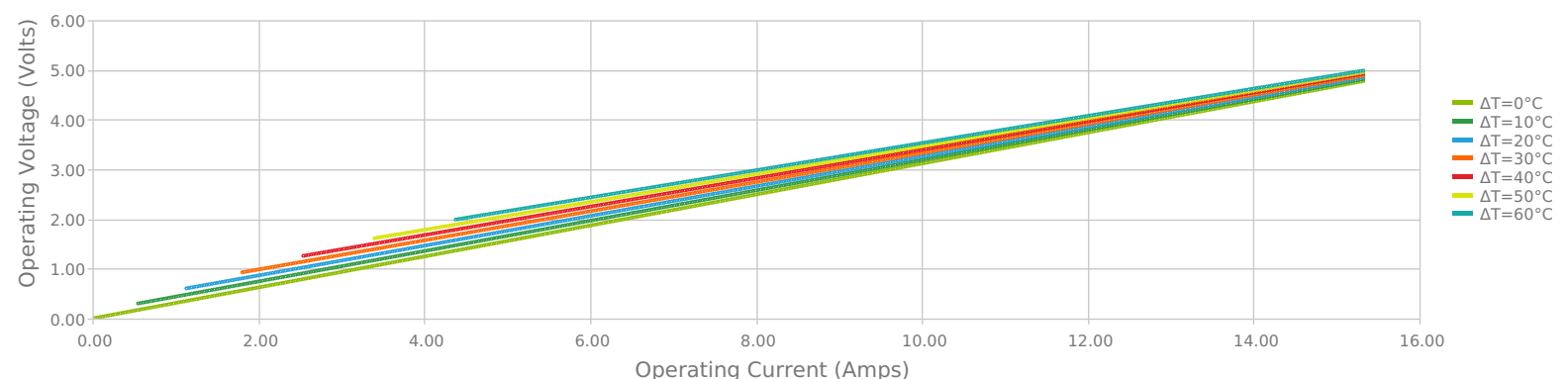
Heat Pumped at Cold Side
 $T_{hot} = 85^\circ C$

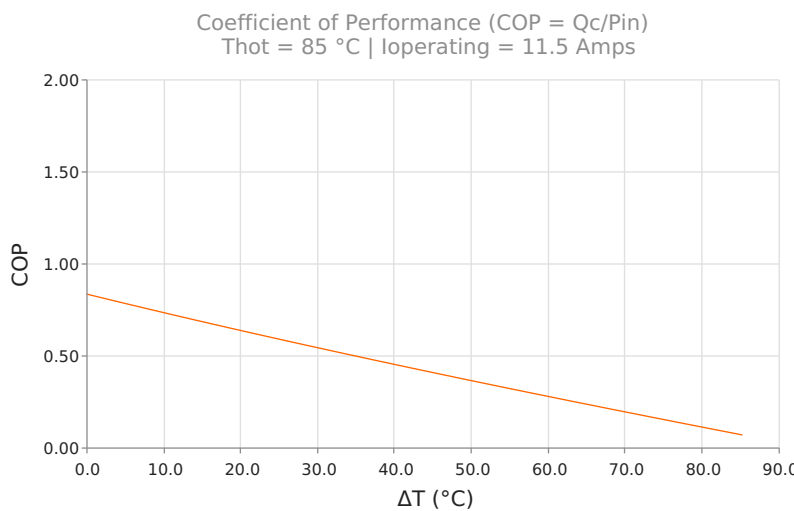
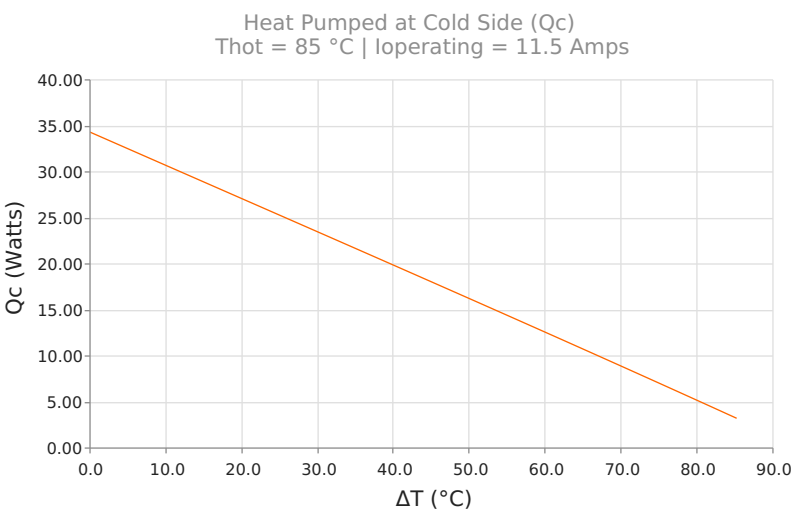
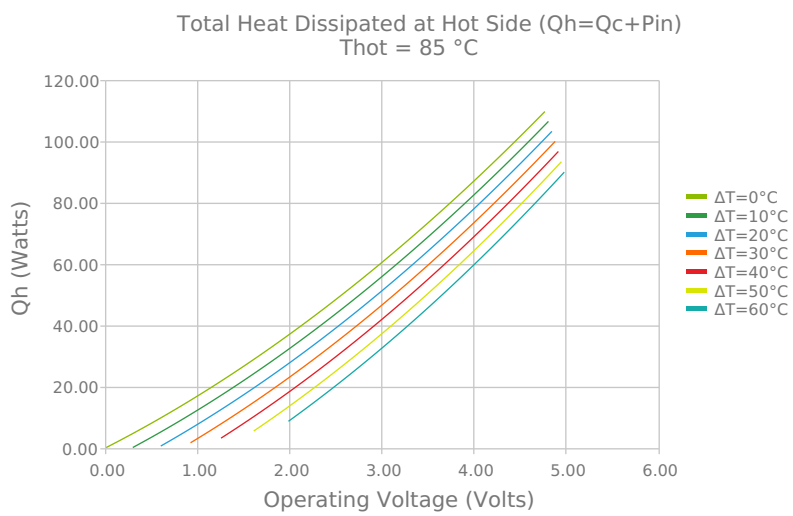
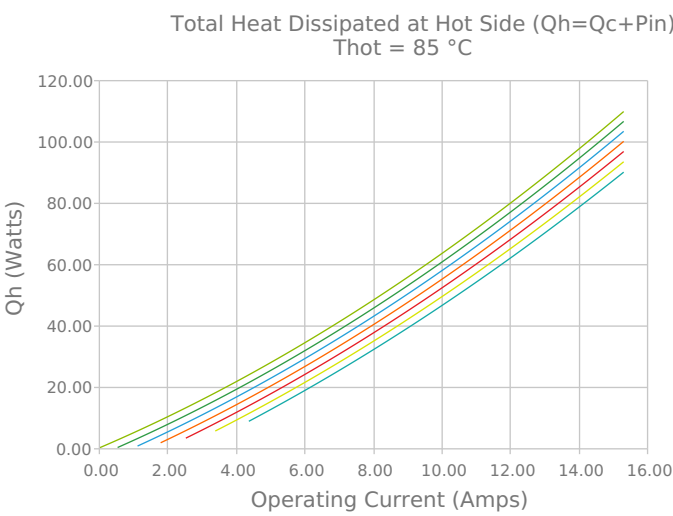
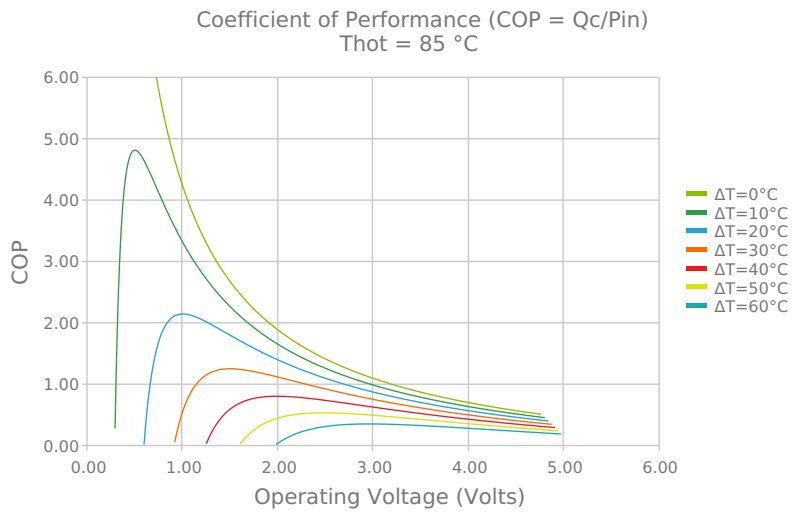
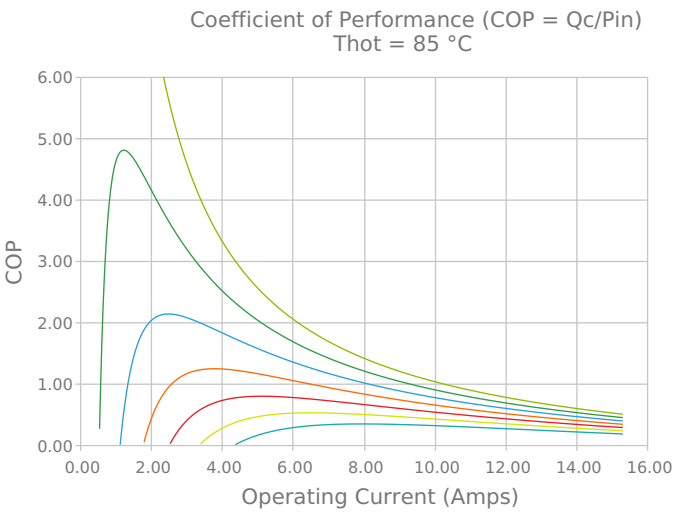


Heat Pumped at Cold Side
 $T_{hot} = 85^\circ C$



Current vs Voltage (I vs V)
 $T_{hot} = 85^\circ C$





Specifications

Hot Side Temperature	50.0 °C	85.0 °C	110.0 °C
Qcmax (ΔT = 0)	33.8 Watts	36.6 Watts	37.7 Watts
ΔTmax (Qc = 0)	83.2°C	95.3°C	102.0°C
I _{max} (I @ ΔT _{max})	14.1 Amps	13.6 Amps	13.3 Amps
V _{max} (V @ ΔT _{max})	4.1 Volts	4.7 Volts	5.1 Volts
Module Resistance	0.27 Ohms	0.31 Ohms	0.34 Ohms
Max Operating Temperature	150 °C		
Weight	19.0 gram(s)		

Finishing Options

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
TB	4.572 ±0.013 mm 0.180 ± 0.0005 in	0.013 mm / 0.013 mm 0.0005 in / 0.0005 in	Lapped	Lapped	152.4 mm 6.00 in

Sealing Options

Suffix	Sealant	Color	Temp Range	Description
EP	Epoxy	Black	-55 to 150°C	Low density syntactic foam epoxy encapsulant

Notes

Max operating temperature: 150°C
Do not exceed I_{max} or V_{max} when operating module
Reference assembly guidelines for recommended installation

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Revision: 00 Date: 06-01-2022

Print Date: 05-13-2025