OptoTEC™ HTX Series HTX15-31-F2A-0909-TB-W2.25
MFG Part Number: 387007115

OptoTEC™ HTX Series Thermoelectric Cooler

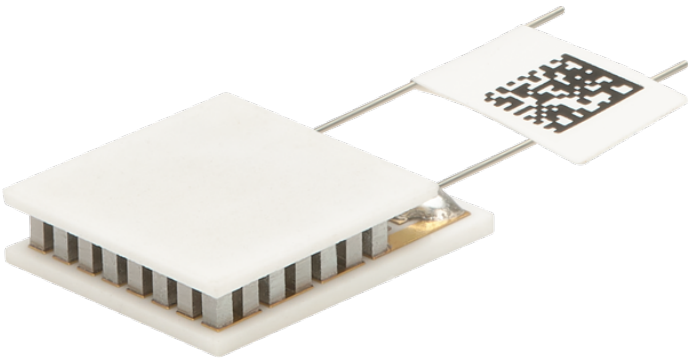
The HTX15-31-F2A-0909-TB-W2.25 is a high-performance, high-temperature, miniature thermoelectric cooler. The HTX15-31-F2A-0909-TB-W2.25 is primarily used in applications to stabilize the temperature of sensitive optical components in the telecom and photonics industries. It has a maximum Qc of 3.5 Watts when ΔT = 0 and a maximum ΔT of 81.6 °C at Qc = 0.

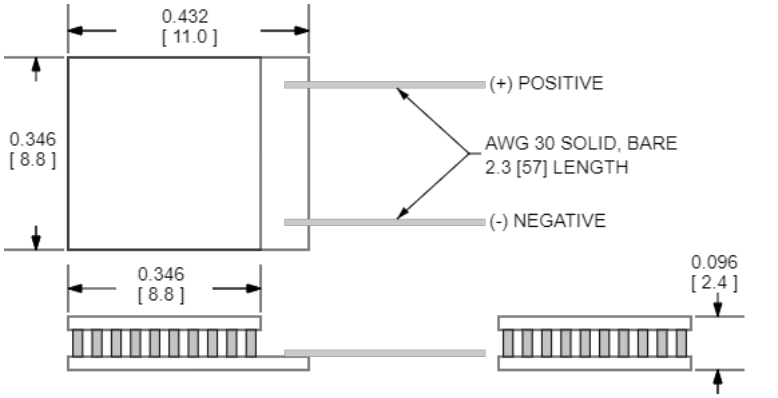
Features

- Miniature footprint
- Precise temperature control
- Reliable solid-state operation
- Operates in high-temperature applications
- No sound or vibration
- RoHS-compliant

Applications

- Laser Diodes
- Optical Transceivers
- Lidar Sensors
- Infrared Range (IR) Sensors
- CMOS Sensors
- Autonomous Systems
- Machine Vision
- Security Cameras

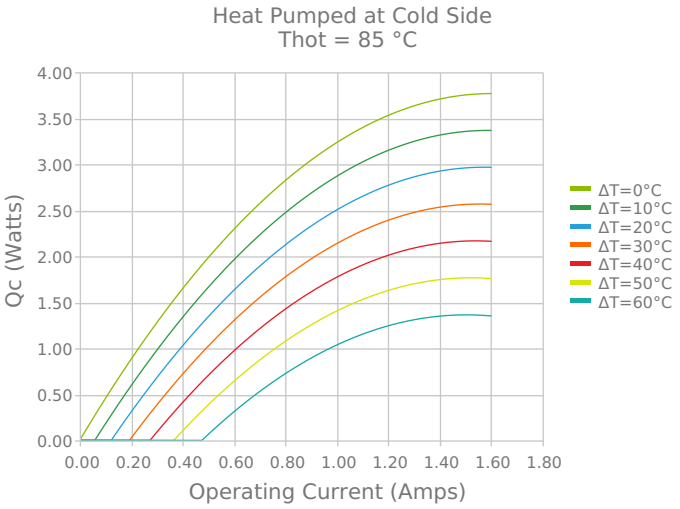


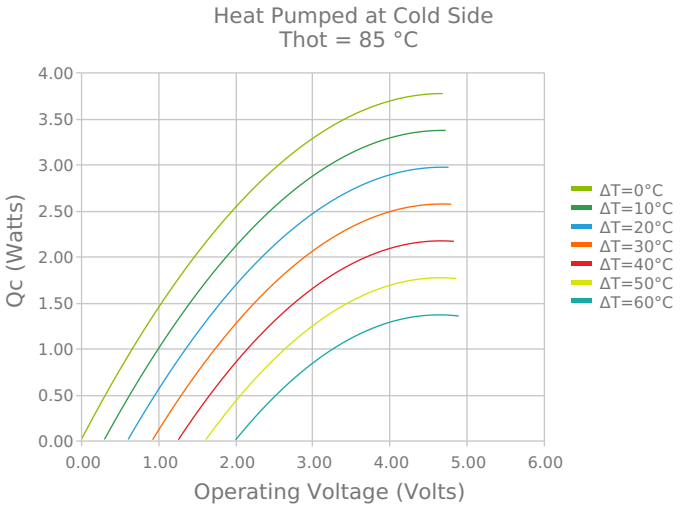


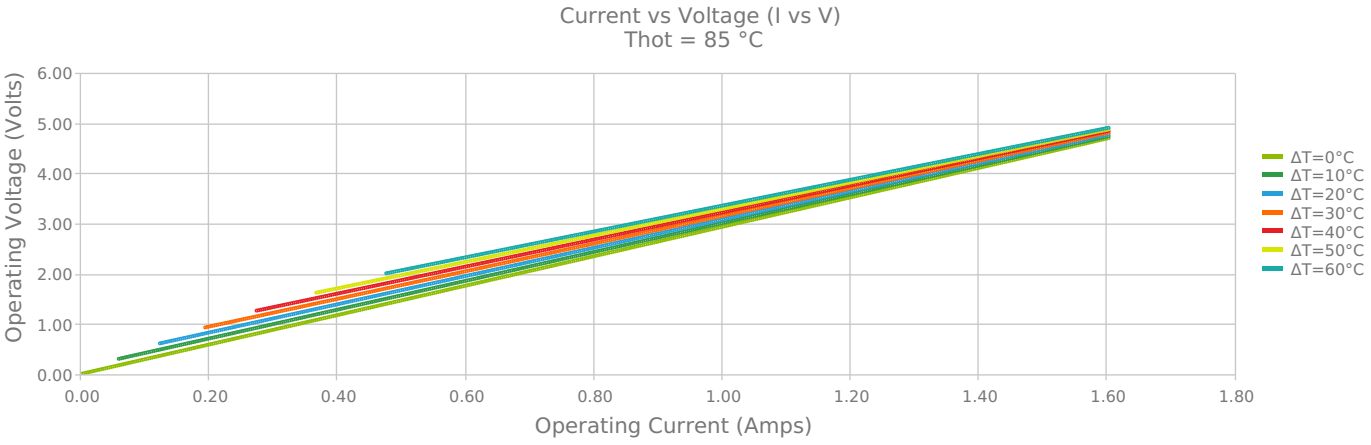
CERAMIC MATERIAL: Al_2O_3
SOLDER CONSTRUCTION: 280°C, AuSn

INCHES [MM]

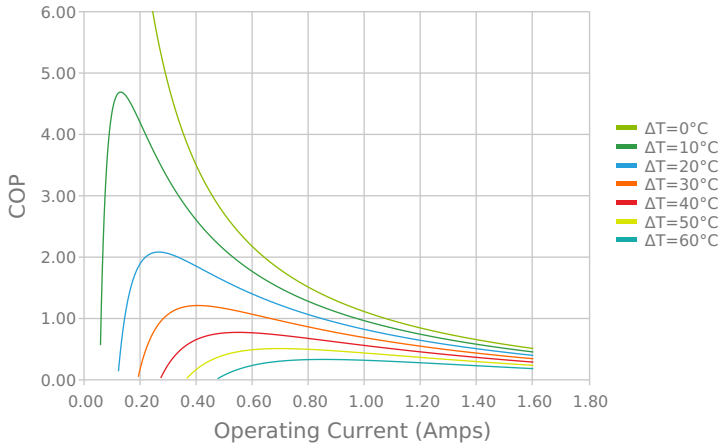
ELECTRICAL AND THERMAL PERFORMANCE







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



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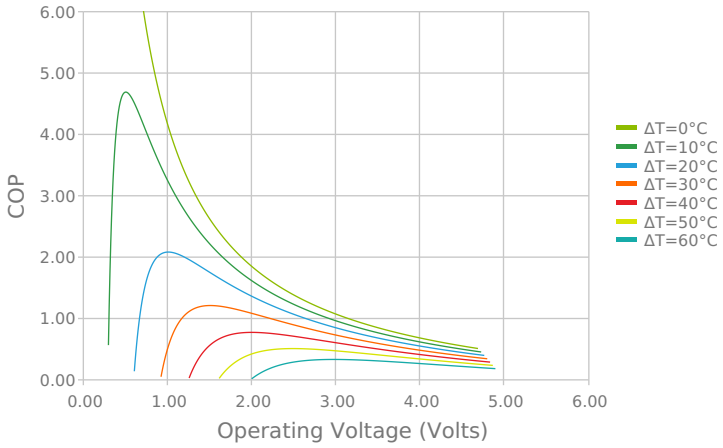
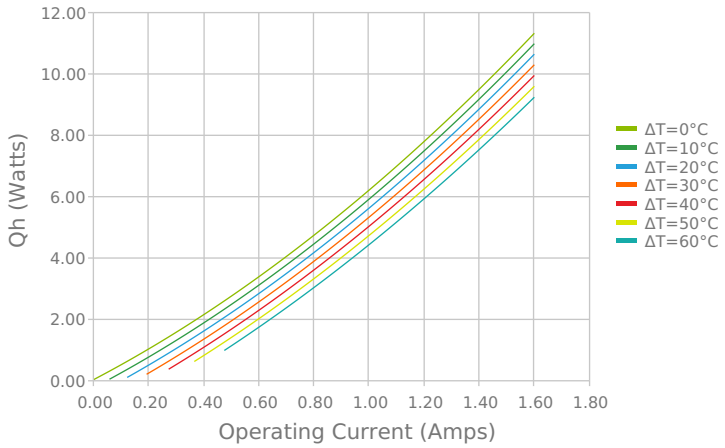


Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 85 °C



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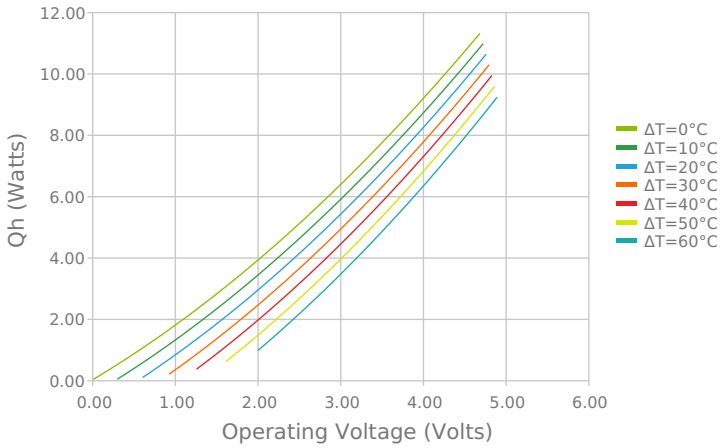
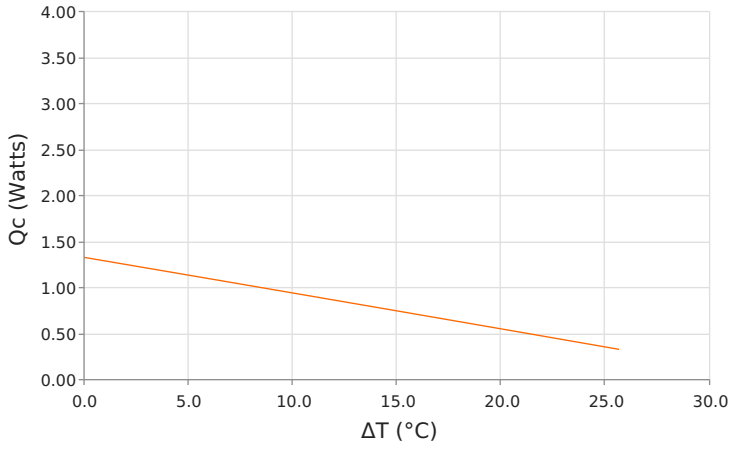
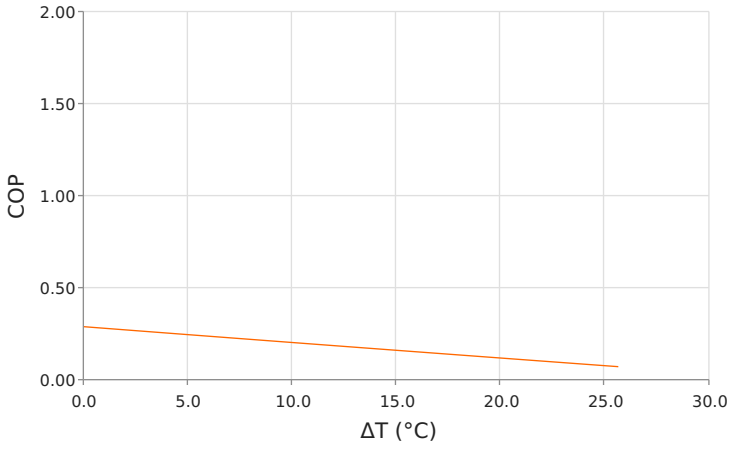


Heat Pumped at Cold Side (Qc)
Thot = 85 °C | Current = 1.2 Amps



Coefficient of Performance (COP = Qc/Pin)
Thot = 85 °C | Current = 1.2 Amps



SPECIFICATIONS*

Hot Side Temperature	50.0 °C	85.0 °C	110.0 °C
Qcmax (ΔT = 0)	3.5 Watts	3.8 Watts	3.9 Watts
ΔTmax (Qc = 0)	81.6°C	93.4°C	99.9°C
Imax (I @ ΔTmax)	1.5 Amps	1.4 Amps	1.4 Amps
Vmax (V @ ΔTmax)	4.0 Volts	4.6 Volts	5.0 Volts
Module Resistance	2.51 Ohms	2.93 Ohms	3.21 Ohms
Max Operating Temperature	150 °C		
Weight	1.0 gram(s)		

* Specifications reflect thermoelectric coefficients updated March 2020

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
TB	2.438 ±0.013 mm 0.096 ± 0.0005 in	0.013 mm / 0.013 mm 0.0005 in / 0.0005 in	Lapped	Lapped	50.8 mm 2.00 in

SEALING OPTIONS

Suffix	Sealant	Color	Temp Range	Description
	None			No sealing specified

NOTES

1. Max operating temperature: 150°C
2. Do not exceed Imax or Vmax when operating module
3. Reference assembly guidelines for recommended installation
4. Solder tinning also available on metallized ceramics

Date: 12/15/2021