OptoTEC™ OTX Series OTX24-31-F1-1010-11-W2.25
MFG Part Number: 387007103

OptoTEC™ OTX Series Thermoelectric Cooler

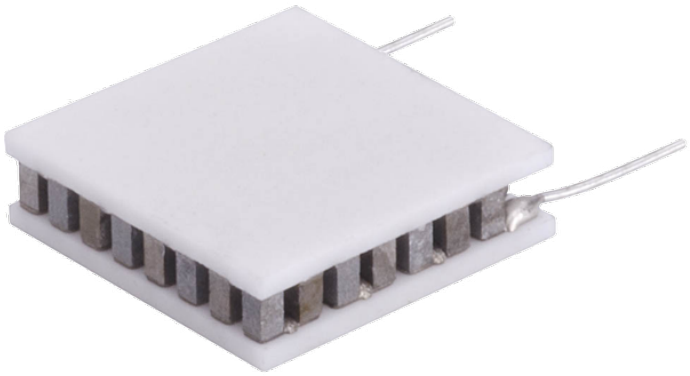
The OTX24-31-F1-1010-11-W2.25 is a high-performance, miniature thermoelectric cooler. The OTX24-31-F1-1010-11-W2.25 is primarily used in applications to stabilize the temperature of sensitive optical components in the telecom and photonics industries. It has a maximum Qc of 5.4 Watts when ΔT = 0 and a maximum ΔT of 72.9 °C at Qc = 0.

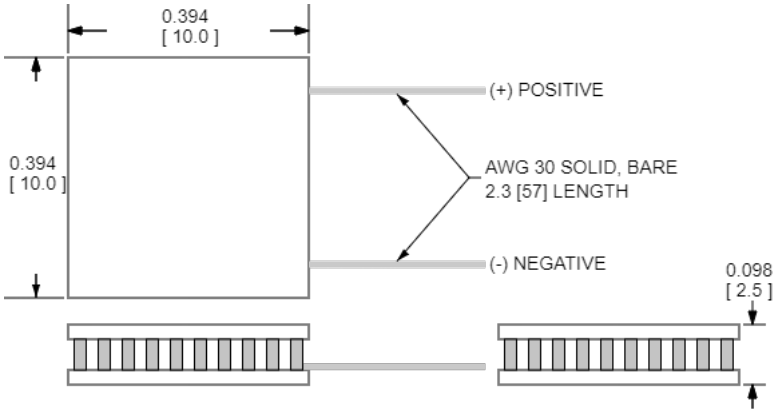
Features

- Miniature footprint
- Precise temperature control
- Reliable solid-state operation
- 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

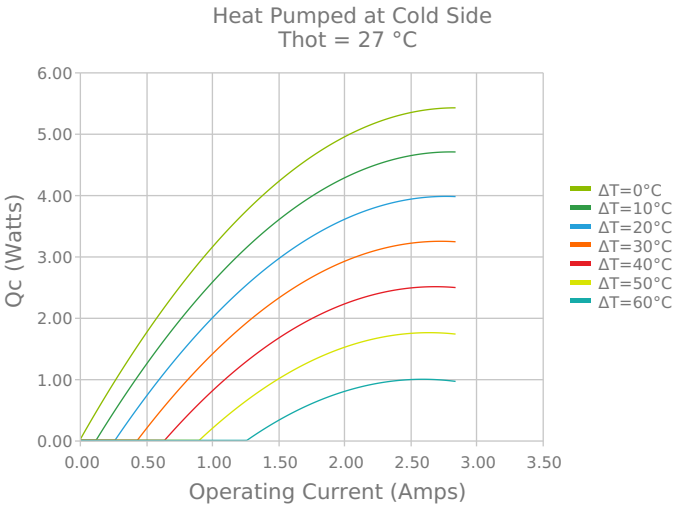


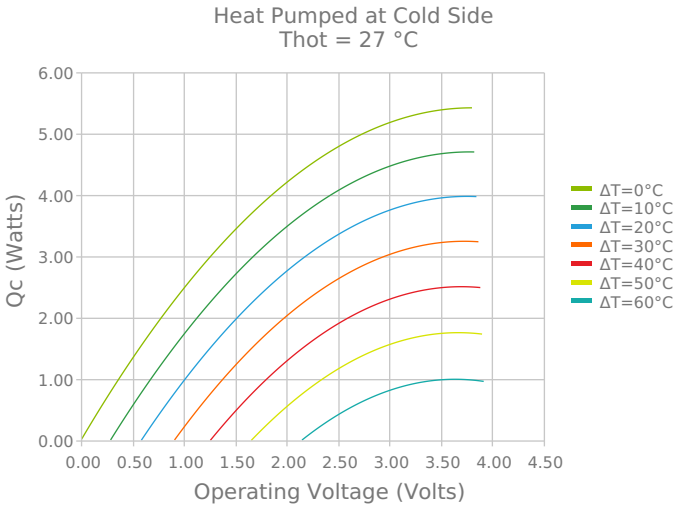


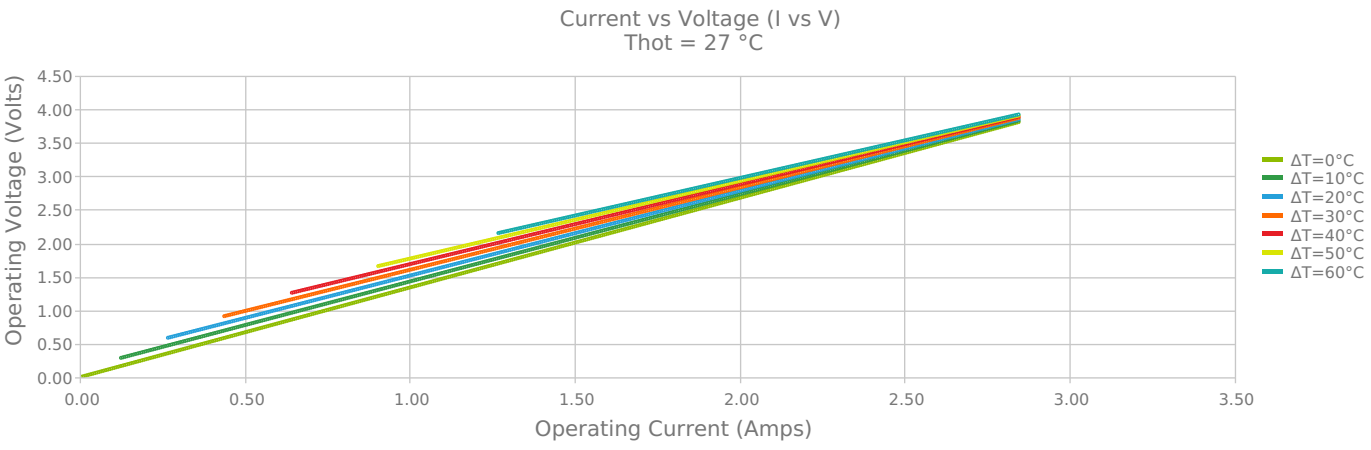
CERAMIC MATERIAL: Al_2O_3
SOLDER CONSTRUCTION: 232°C, SbSn

INCHES [MM]

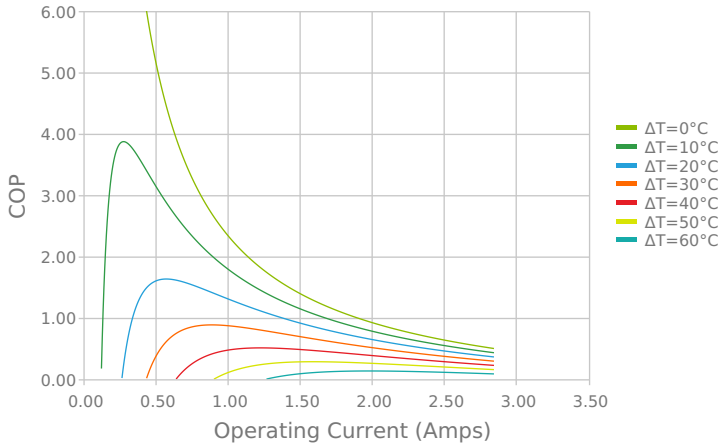
ELECTRICAL AND THERMAL PERFORMANCE







Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C



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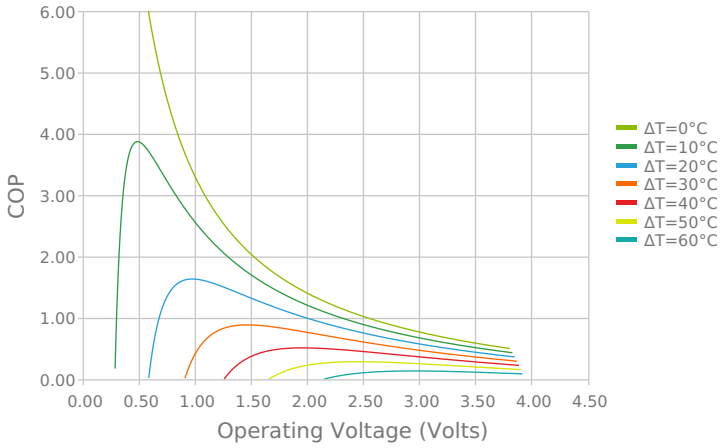
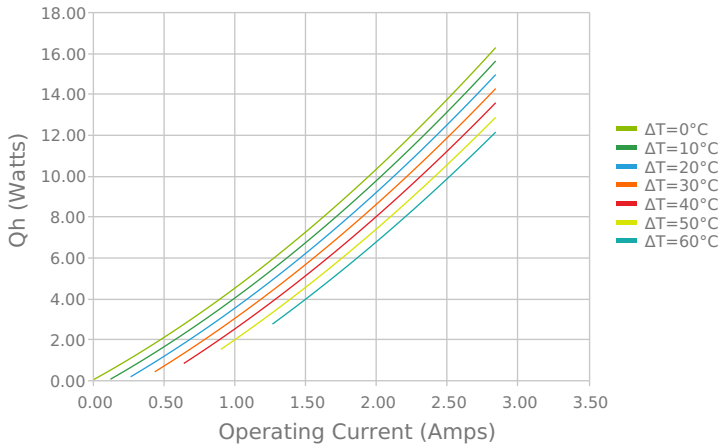


Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C



Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
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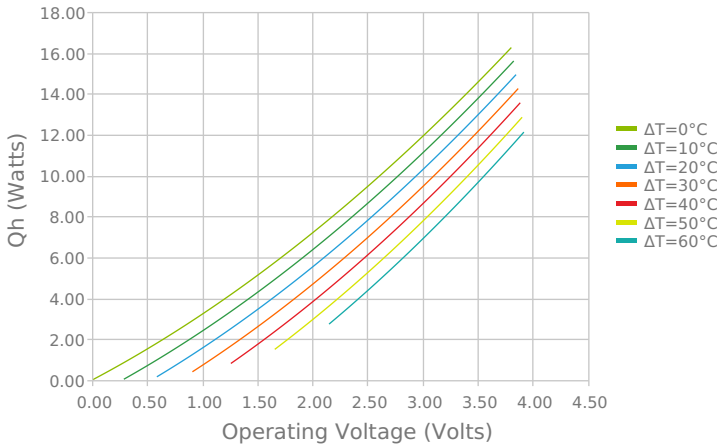
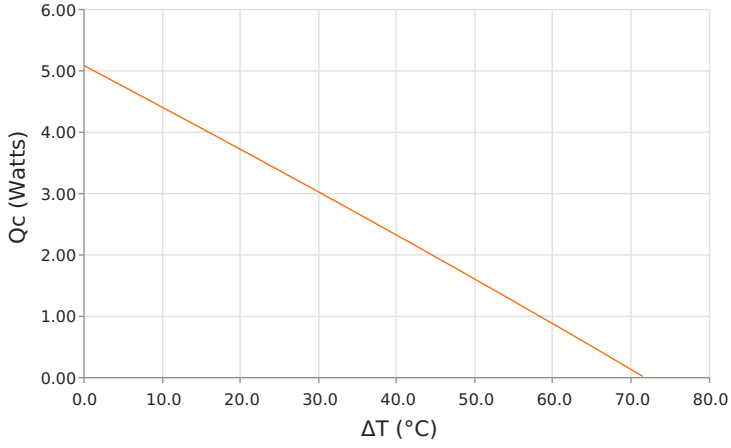
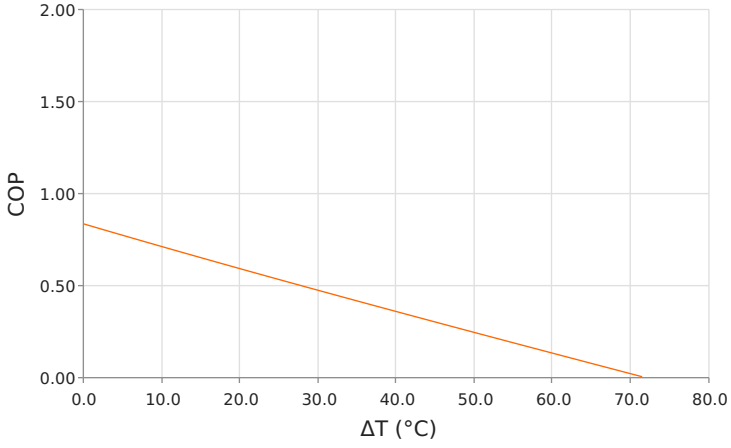


Heat Pumped at Cold Side (Qc)
Thot = 27 °C | Current = 2.1 Amps



Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C | Current = 2.1 Amps



SPECIFICATIONS*

Hot Side Temperature	27.0 °C	50.0 °C	80.0 °C
Qcmax (ΔT = 0)	5.4 Watts	5.8 Watts	6.3 Watts
ΔTmax (Qc = 0)	72.9°C	81.8°C	92.1°C
Imax (I @ ΔTmax)	2.5 Amps	2.5 Amps	2.4 Amps
Vmax (V @ ΔTmax)	3.6 Volts	4.0 Volts	4.5 Volts
Module Resistance	1.34 Ohms	1.51 Ohms	1.72 Ohms
Max Operating Temperature	120 °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
11	2.500 ±0.127 mm 0.098 ± 0.0050 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
	None			No sealing specified

NOTES

1. Max operating temperature: 120°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

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