

OptoTEC™ OT Series Thermoelectric Cooler

The OT12-66-F0-1211-GG-W2.25 is a miniature thermoelectric cooler. The OT12-66-F0-1211-GG-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 4.9 Watts when $\Delta T = 0$ and a maximum ΔT of 68 °C at Qc = 0.

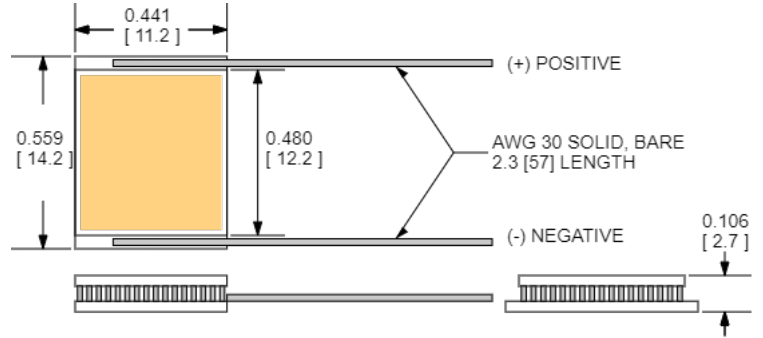


Features

- Miniature geometric sizes
- Precise temperature control
- Reliable solid-state operation
- No sound or vibration
- DC operation
- RoHS-compliant

Applications

- Thermoelectric Cooling for CMOS Sensors
- Cooling Solutions for Autonomous Systems
- Heads-Up Displays, Imaging Sensors

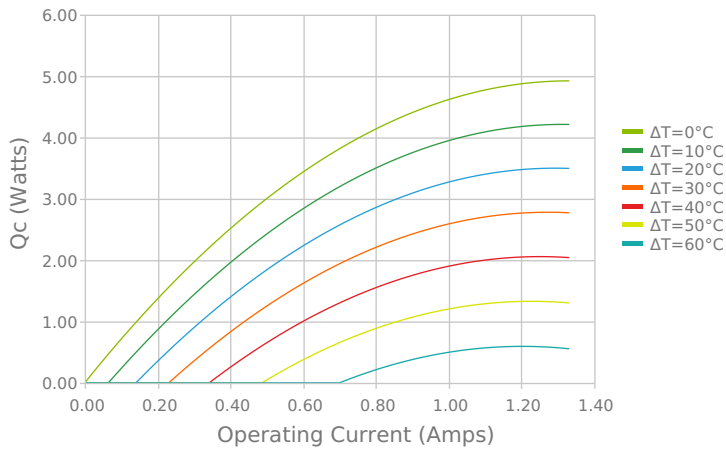


CERAMIC MATERIAL: Al₂O₃
SOLDER CONSTRUCTION: 138°C, BiSn

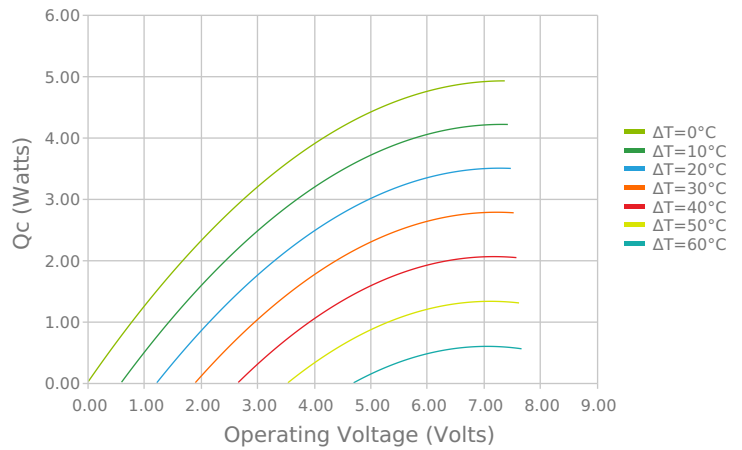
INCHES [MM]

ELECTRICAL AND THERMAL PERFORMANCE

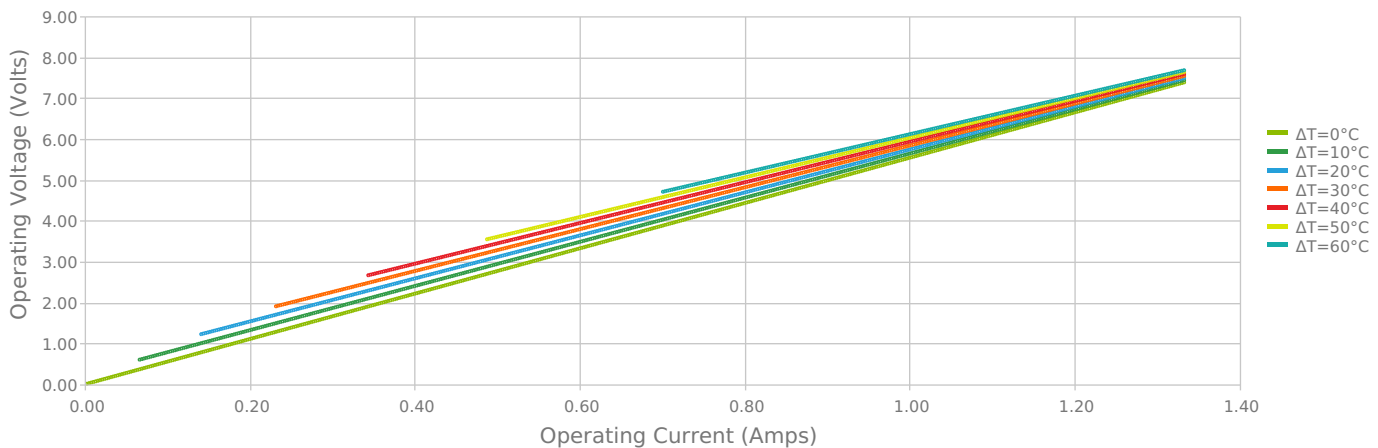
Heat Pumped at Cold Side
Thot = 27 °C



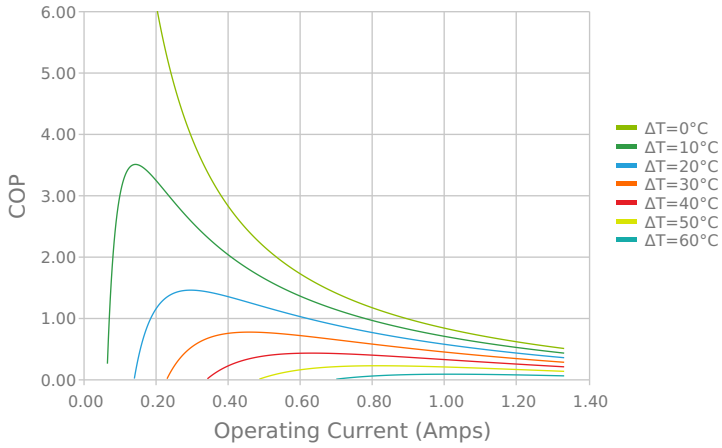
Heat Pumped at Cold Side
Thot = 27 °C



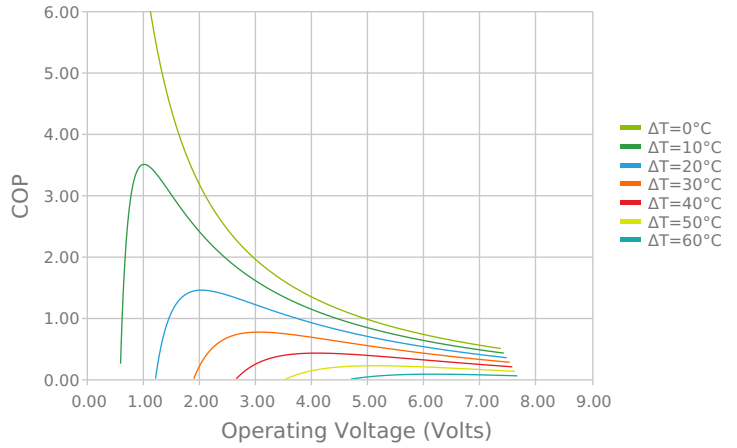
Current vs Voltage (I vs V)
Thot = 27 °C



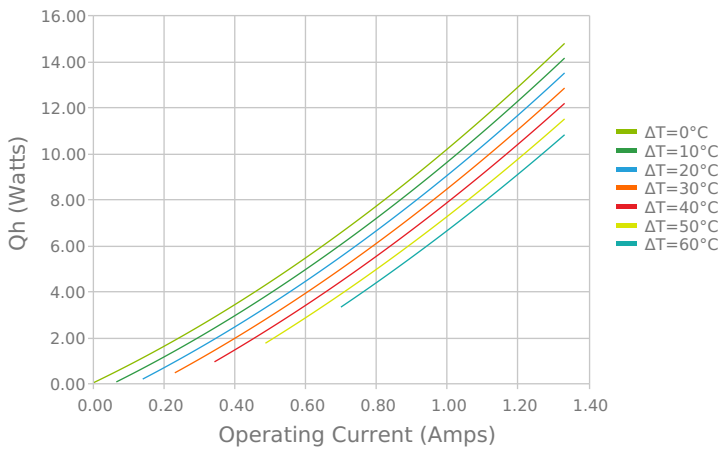
Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C



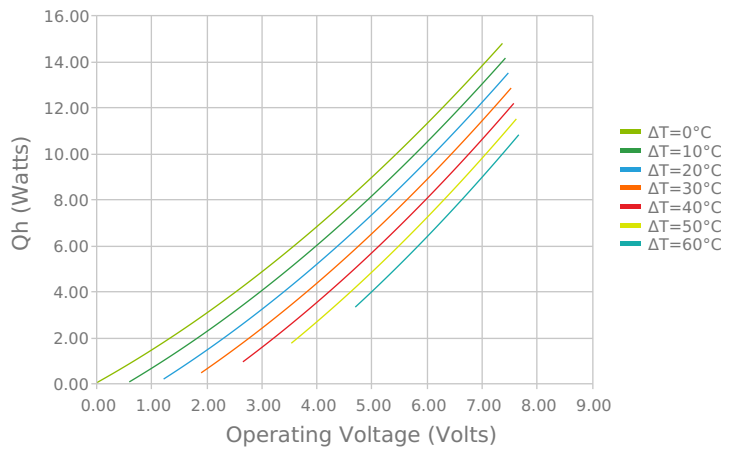
Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C



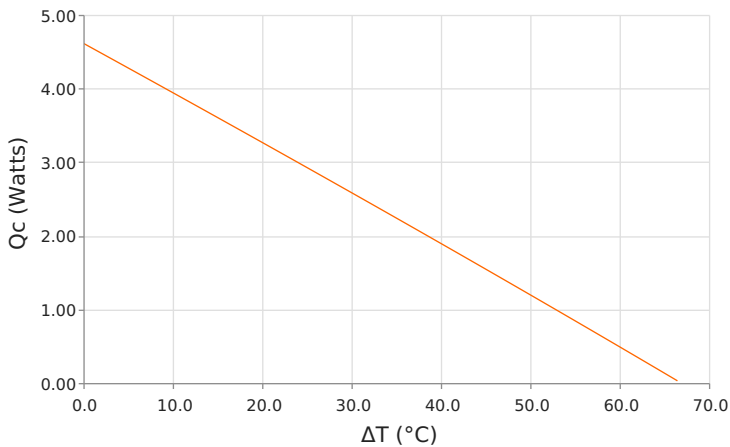
Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C



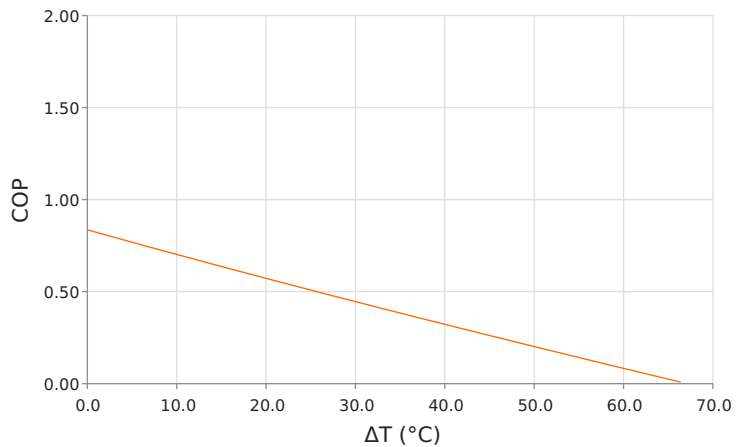
Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C



Heat Pumped at Cold Side (Qc)
Thot = 27 °C | Current = 1.0 Amps



Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C | Current = 1.0 Amps



SPECIFICATIONS*

Hot Side Temperature	27.0 °C	35.0 °C	50.0 °C
Qcmax ($\Delta T = 0$)	4.9 Watts	5.1 Watts	5.3 Watts
ΔT_{max} ($Q_c = 0$)	68.0°C	70.9°C	76.0°C
I_{max} (I @ ΔT_{max})	1.2 Amps	1.2 Amps	1.2 Amps
V_{max} (V @ ΔT_{max})	7.0 Volts	7.3 Volts	7.8 Volts
Module Resistance	5.54 Ohms	5.77 Ohms	6.20 Ohms
Max Operating Temperature	80 °C		
Weight	2.0 gram(s)		

* Specifications reflect thermoelectric coefficients updated March 2020

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
TB	2.692 ±0.013 mm 0.106 ± 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: 80°C
2. Do not exceed I_{max} or V_{max} when operating module
3. Reference assembly guidelines for recommended installation
4. Solder tinning also available on metallized ceramics

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