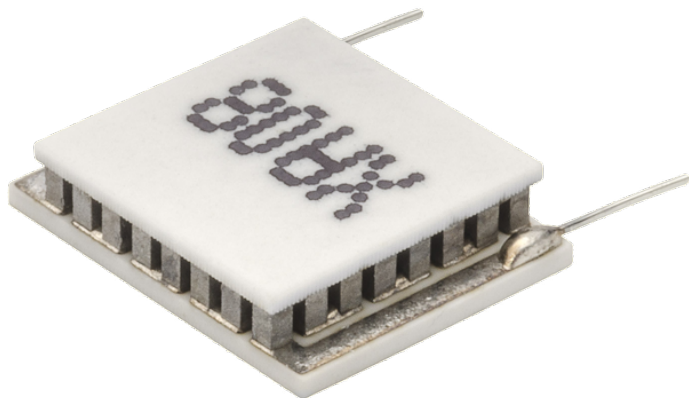


OptoTEC™ OT Series Thermoelectric Cooler

The OT20-32-F0-0808-11-RT-W2.25 is a miniature thermoelectric cooler. The OT20-32-F0-0808-11-RT-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 Q_c of 4 Watts when $\Delta T = 0$ and a maximum ΔT of 68 °C at $Q_c = 0$.

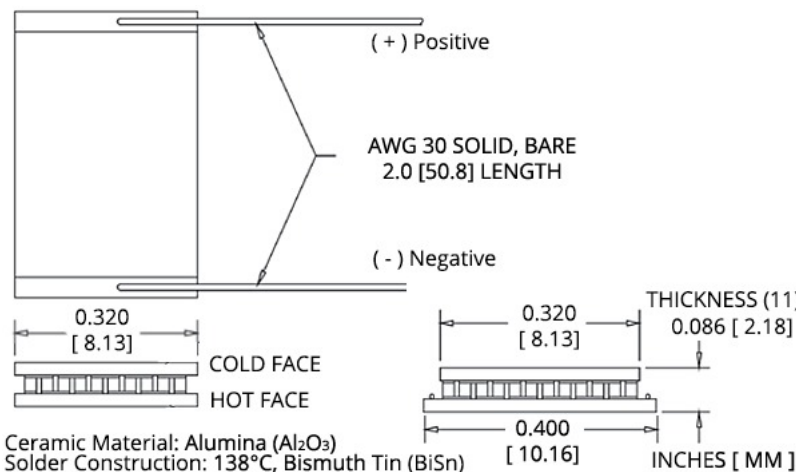


Features

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

Applications

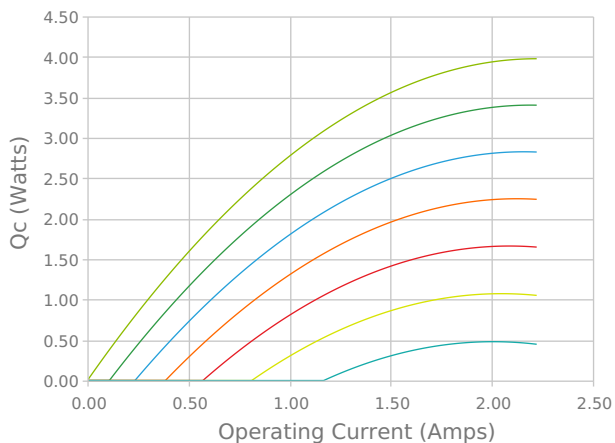
- Thermoelectric Cooling for CMOS Sensors
- Cooling Solutions for Autonomous Systems
- Heads-Up Displays, Imaging Sensors



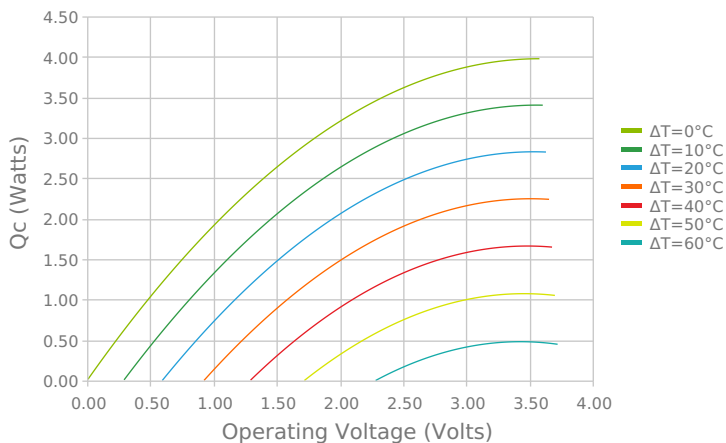
Note: Allow 0.020 in [0.5 mm] around perimeter of the thermoelectric cooler and lead wire attachment to accommodate sealant

ELECTRICAL AND THERMAL PERFORMANCE

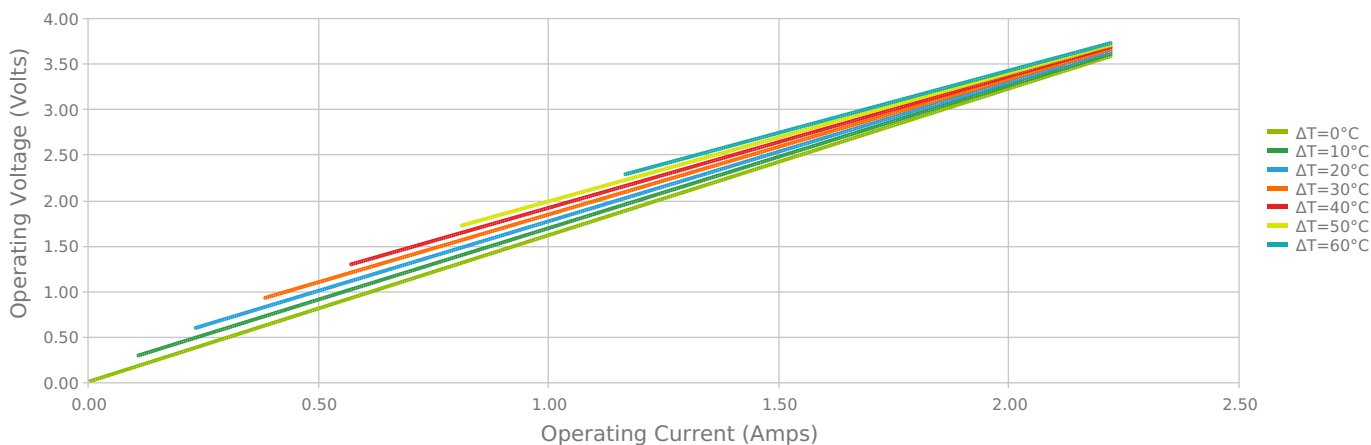
Heat Pumped at Cold Side
 $T_{hot} = 27\text{ °C}$



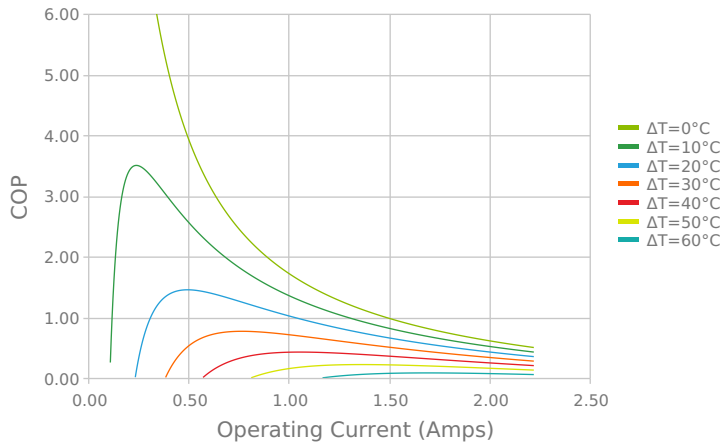
Heat Pumped at Cold Side
 $T_{hot} = 27\text{ °C}$



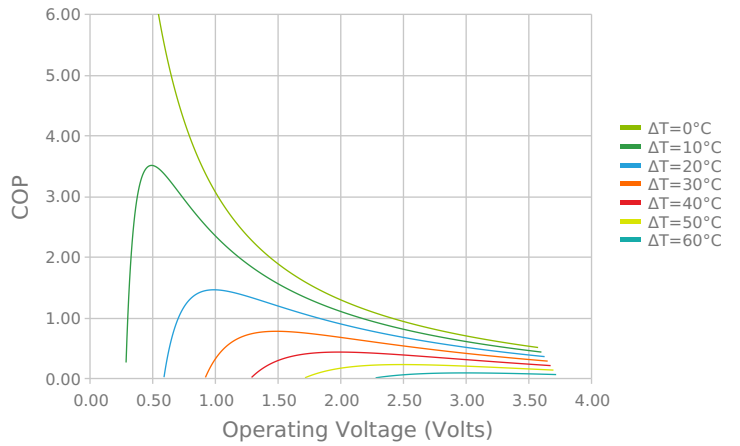
Current vs Voltage (I vs V)
 $T_{hot} = 27\text{ °C}$



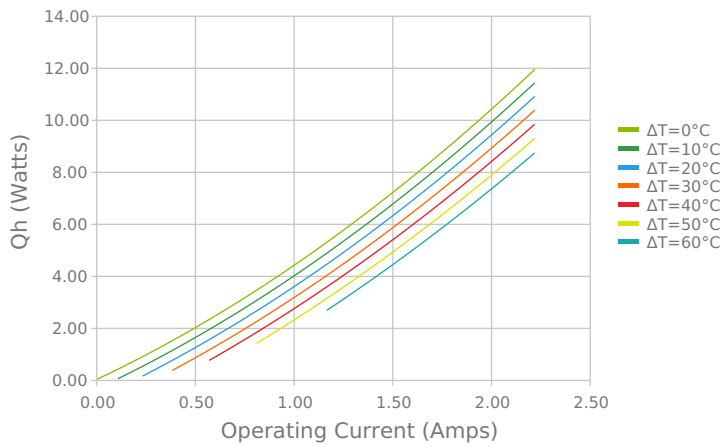
Coefficient of Performance (COP = Q_c/P_{in})
 $T_{hot} = 27\text{ }^{\circ}\text{C}$



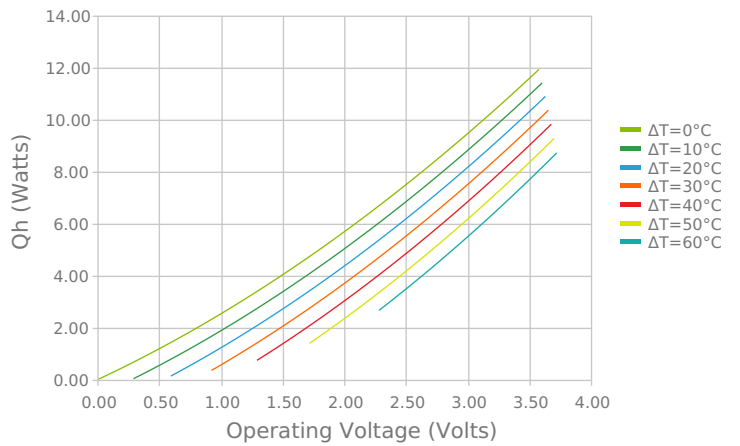
Coefficient of Performance (COP = Q_c/P_{in})
 $T_{hot} = 27\text{ }^{\circ}\text{C}$



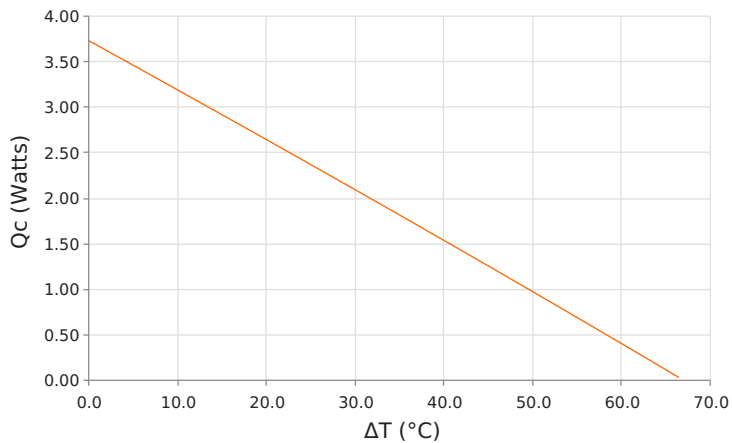
Total Heat Dissipated at Hot Side ($Q_h = Q_c + P_{in}$)
 $T_{hot} = 27\text{ }^{\circ}\text{C}$



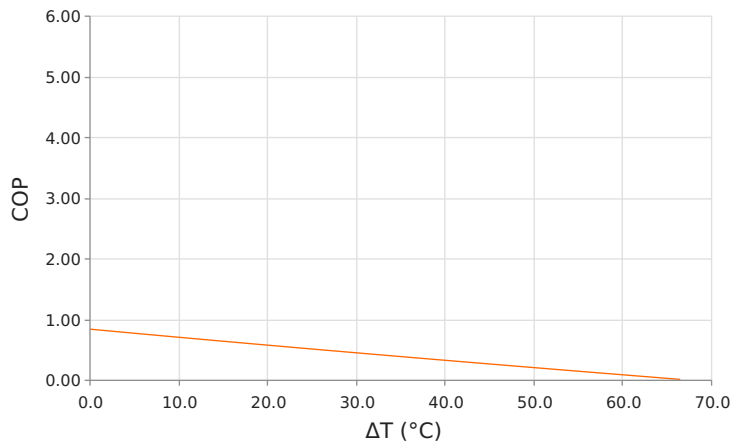
Total Heat Dissipated at Hot Side ($Q_h = Q_c + P_{in}$)
 $T_{hot} = 27\text{ }^{\circ}\text{C}$



Heat Pumped at Cold Side (Q_c)
 $T_{hot} = 27\text{ }^{\circ}\text{C}$ | Current = 1.7 Amps



Coefficient of Performance (COP = Q_c/P_{in})
 $T_{hot} = 27\text{ }^{\circ}\text{C}$ | Current = 1.7 Amps



SPECIFICATIONS*

Hot Side Temperature

Qcmax ($\Delta T = 0$)

ΔT_{max} ($Q_c = 0$)

I_{max} (I @ ΔT_{max})

V_{max} (V @ ΔT_{max})

Module Resistance

Max Operating Temperature

Weight

27.0 °C

35.0 °C

50.0 °C

4.0 Watts	4.1 Watts	4.3 Watts
68.0°C	70.9°C	76.0°C
2.0 Amps	2.0 Amps	1.9 Amps
3.4 Volts	3.5 Volts	3.8 Volts
1.61 Ohms	1.68 Ohms	1.80 Ohms
80 °C		
1.0 gram(s)		

* Specifications reflect thermoelectric coefficients updated March 2020

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
11	2.184 ±0.051 mm 0.086 ± 0.002 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
RT	RTV	White	-60 to 204°C	Non-corrosive, silicone adhesive

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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Date: 04/24/2020