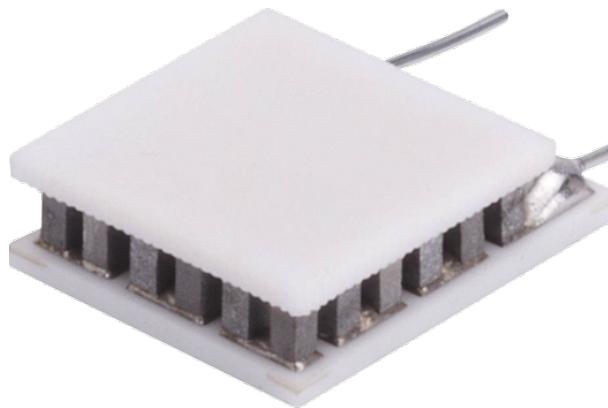


OptoTEC™ OTX Series Thermoelectric Cooler

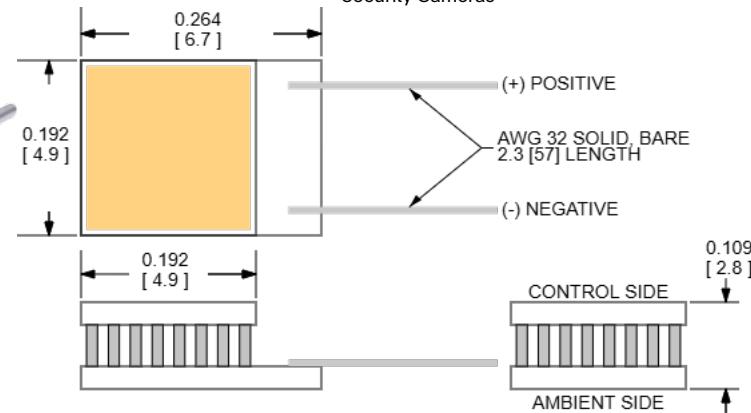
The OTX08-18-F2-0505-GG-W2.25 is a high-performance, miniature thermoelectric cooler. The OTX08-18-F2-0505-GG-W2.25 is primarily used in applications to stabilize the temperature of sensitive optical components in the telecom and photonics industries. It has a maximum Q_c of 1 Watts when $\Delta T = 0$ and a maximum ΔT of 72.9 °C at $Q_c = 0$.

**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

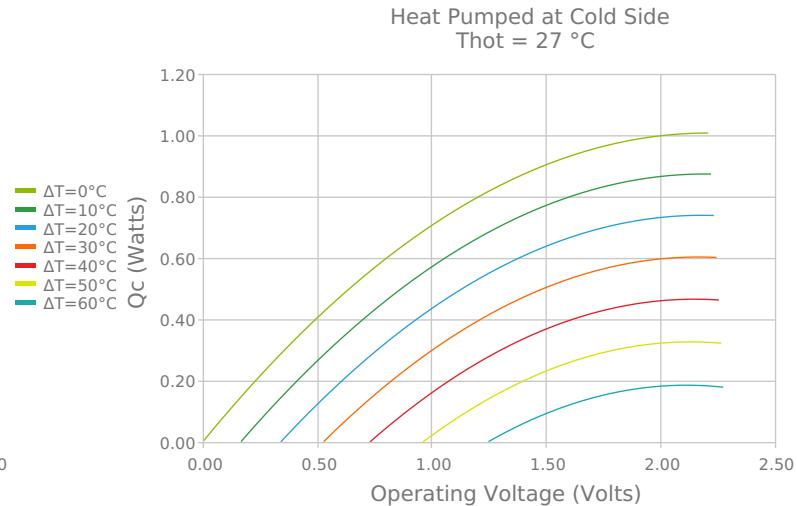
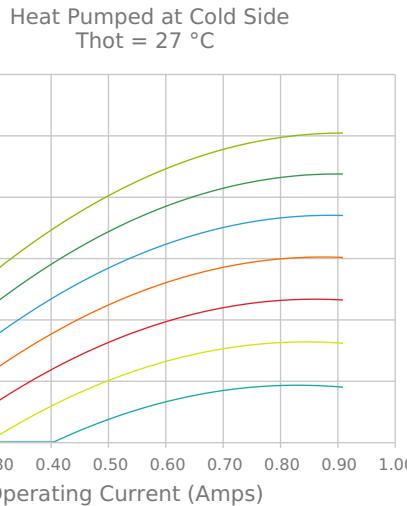


CERAMIC MATERIAL: Al_2O_3
SOLDER CONSTRUCTION: 232°C, SbSn

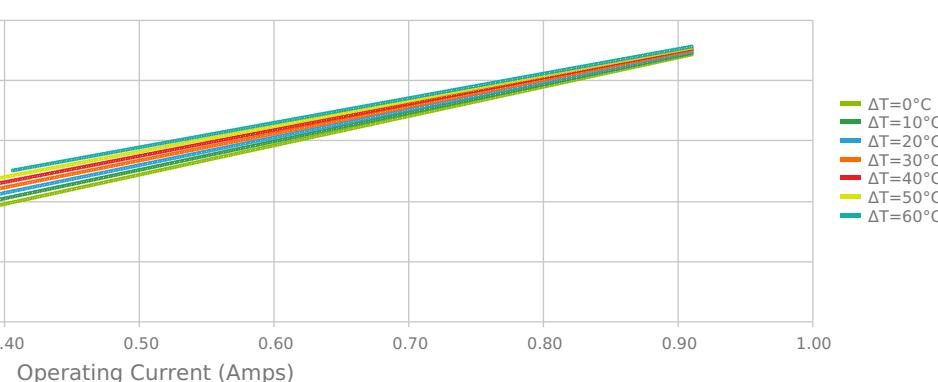
INCHES [MM]

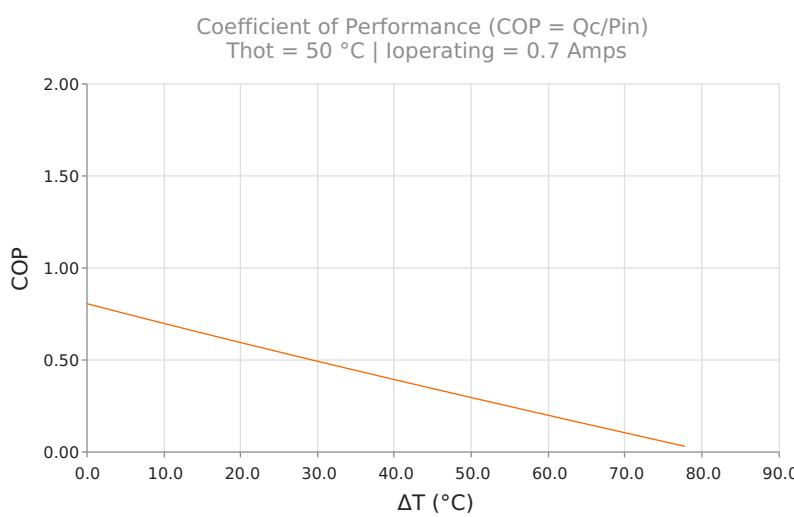
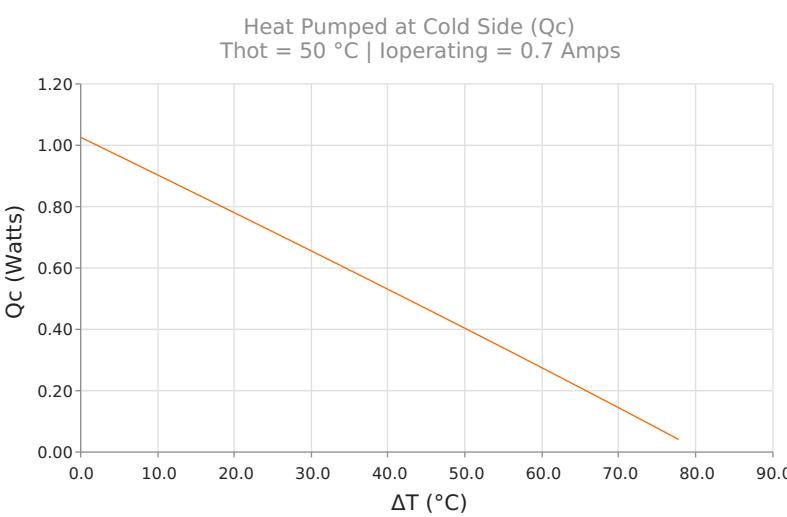
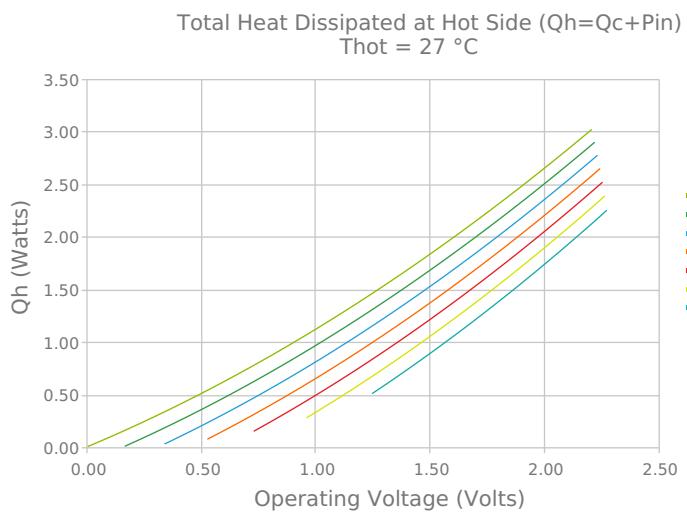
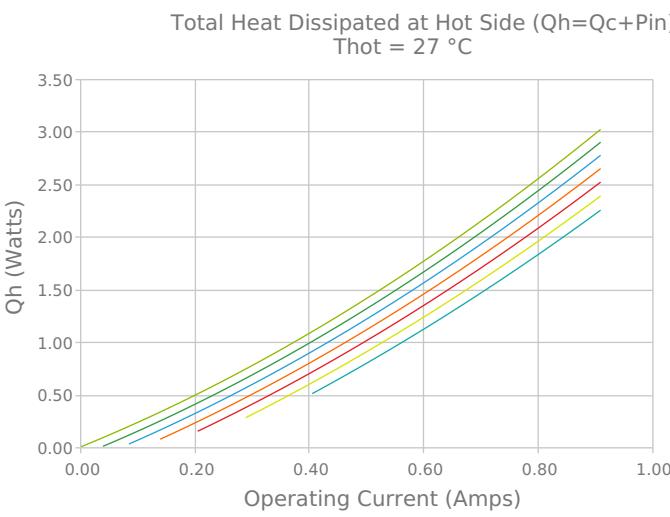
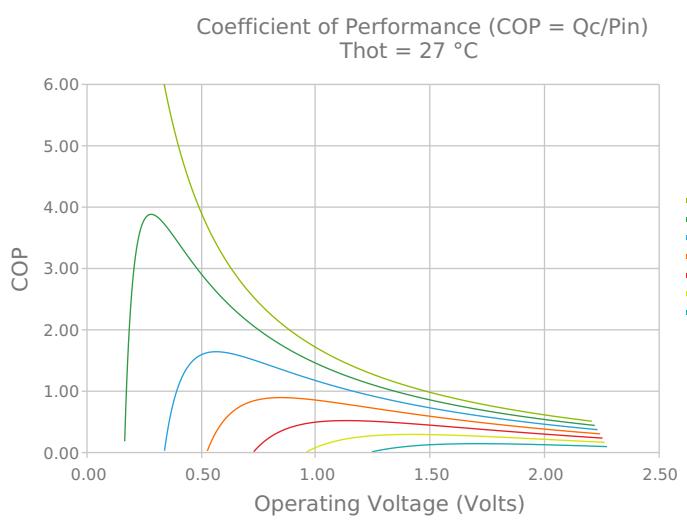
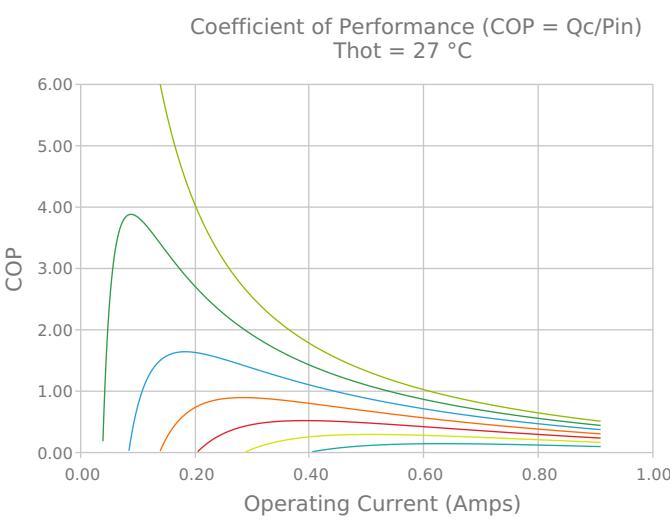
Electrical and Thermal Performance

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.



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





Specifications

| Hot Side Temperature | 27.0 °C | 50.0 °C | 80.0 °C |
|--|-------------|-----------|-----------|
| Qcmax ($\Delta T = 0$) | 1.0 Watts | 1.1 Watts | 1.2 Watts |
| ΔT_{max} ($Q_c = 0$) | 72.9°C | 81.8°C | 92.1°C |
| I _{max} (I @ ΔT_{max}) | 0.8 Amps | 0.8 Amps | 0.8 Amps |
| V _{max} (V @ ΔT_{max}) | 2.1 Volts | 2.3 Volts | 2.6 Volts |
| Module Resistance | 2.43 Ohms | 2.73 Ohms | 3.13 Ohms |
| Max Operating Temperature | 120 °C | | |
| Weight | 1.0 gram(s) | | |

Finishing Options

| Suffix | Thickness | Flatness / Parallelism | Hot Face | Cold Face | Lead Length |
|--------|---|------------------------|-----------|-----------|--------------------|
| GG | 2.769 \pm 0.127 mm 0.109 \pm 0.0050 in | N/A / N/A | Au Plated | Au Plated | 50.8 mm 2.00 in |

Sealing Options

| Suffix | Sealant | Color | Temp Range | Description |
|--------|---------|-------|------------|----------------------|
| | None | | | No sealing specified |

Notes

Max operating temperature: 120°C
Do not exceed I_{max} or V_{max} when operating module
Reference assembly guidelines for recommended installation
Solder tinning also available on metallized ceramics

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