

OptoTEC™ OT Series Thermoelectric Cooler

Note: This product is not recommended for new designs.

This product series has been replaced with the OptoTEC $^{\text{\tiny{TM}}}$ OTX Series. The recommended replacement is:

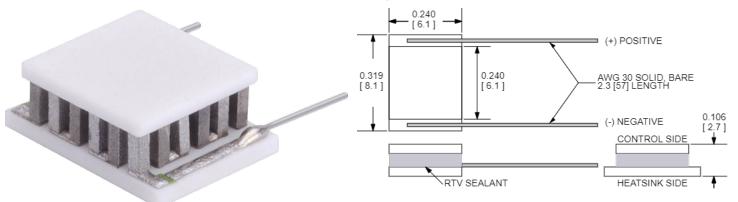
Description: OTX12-18-F0-0606-11-RT-W2.25

Features

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

Applications

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



CERAMIC MATERIAL: Al₂O₃

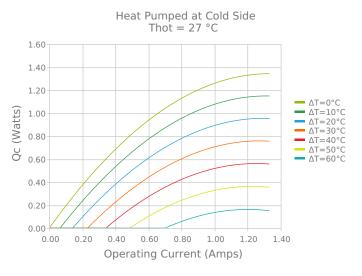
SOLDER CONSTRUCTION: 138°C, BiSn

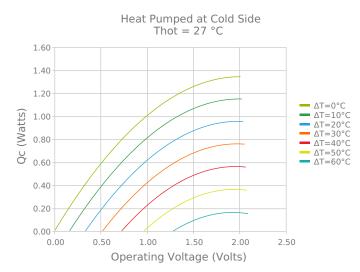
INCHES [MM]

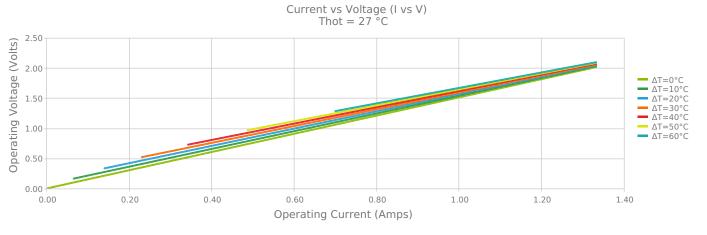
Note: Allow 0.020 in [0.5 mm] around perimeter of the thermoelectric cooler and lead wire attachment to accommodate sealant

ELECTRICAL AND THERMAL PERFORMANCE

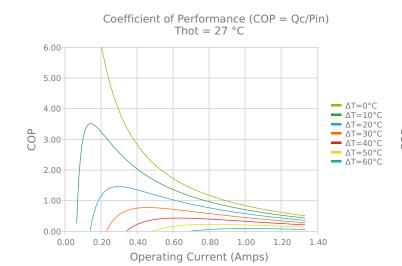
For maximum performance, be sure to orient the CONTROL side of the TEC against the application to be managed and the HEATSINK side against the heat sink or other heat rejection method. The CONTROL side is always opposite the side with lead attachments. Lead attachment is a passive heat loss and less impactful if located on the side that attaches to the heat exchanger.

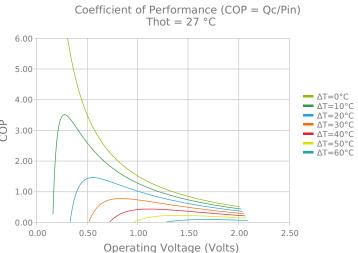


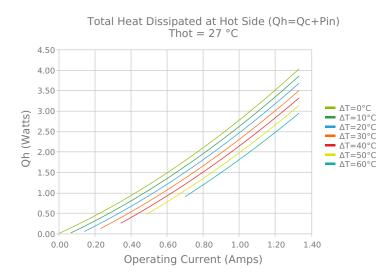


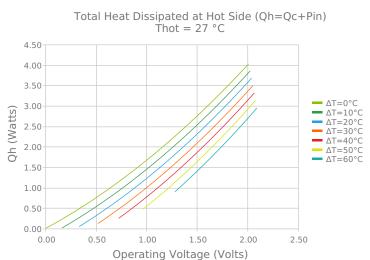


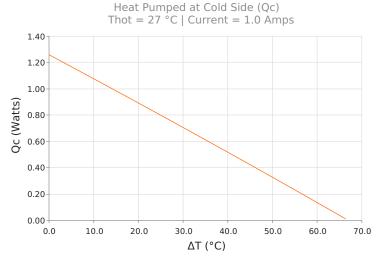


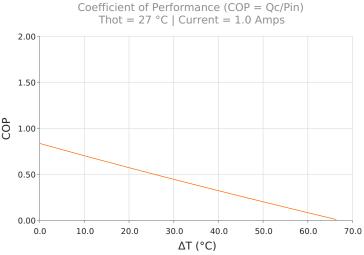














SPECIFICATIONS*

Hot Side Temperature

 $Qcmax (\Delta T = 0)$

 $\Delta T max (Qc = 0)$

Imax (I @ ATmax)

Vmax (V @ Δ Tmax)

Module Resistance

Max Operating Temperature

Weight

| 27.0 °C | 35.0 °C | 50.0 °C |
|-------------|-----------|-----------|
| 1.3 Watts | 1.4 Watts | 1.5 Watts |
| 68.0°C | 70.9°C | 76.0°C |
| 1.2 Amps | 1.2 Amps | 1.2 Amps |
| 1.9 Volts | 2.0 Volts | 2.1 Volts |
| 1.51 Ohms | 1.57 Ohms | 1.69 Ohms |
| 80 °C | | |
| 1.0 gram(s) | | |

FINISHING OPTIONS

| Suffix | Thickness | Flatness / Parallelism | Hot Face | Cold Face | Lead Length |
|--------|-----------|--|-----------------|-----------|--------------------|
| | | 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 | Translucent or White | -60 to 204°C | Non-corrosive, silicone adhesive |

NOTES

- 1. Max operating temperature: 80°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

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^{*} Specifications reflect thermoelectric coefficients updated March 2020