

**OptoTEC™ MSX Series Thermoelectric Cooler**

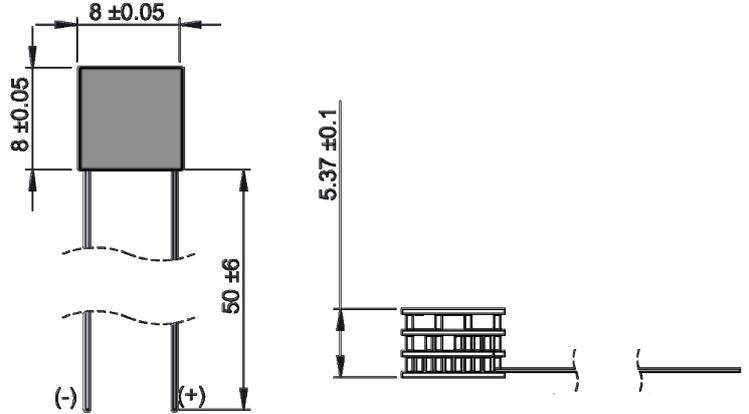
The MSX3-070-F1N-0808-12-11-W2 is a high-performance, miniature thermoelectric cooler. The MSX3-070-F1N-0808-12-11-W2 is primarily used in applications to stabilize the temperature of sensitive optical components in the telecom and photonics industries. It has a maximum  $Q_c$  of 0.668 Watts when  $\Delta T = 0$  and a maximum  $\Delta T$  of 121 °C at  $Q_c = 0$ .

**Features**

- Miniature footprint
- Precise temperature control
- Reliable solid-state operation
- Operates in high-temperature applications
- No sound or vibration
- RoHS-compliant

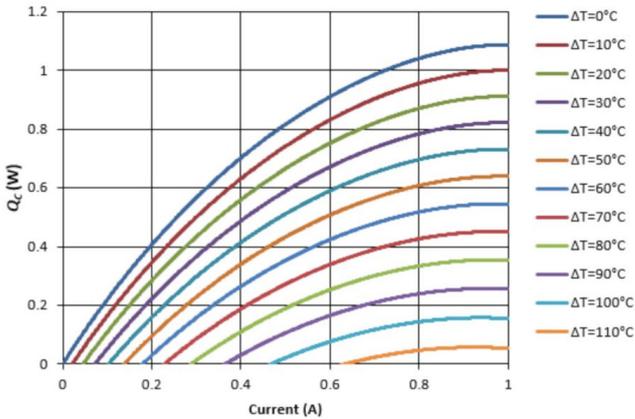
**Applications**

- Infrared Range Sensors
- Charge-Coupled Devices (CCD)
- X-Ray Detectors

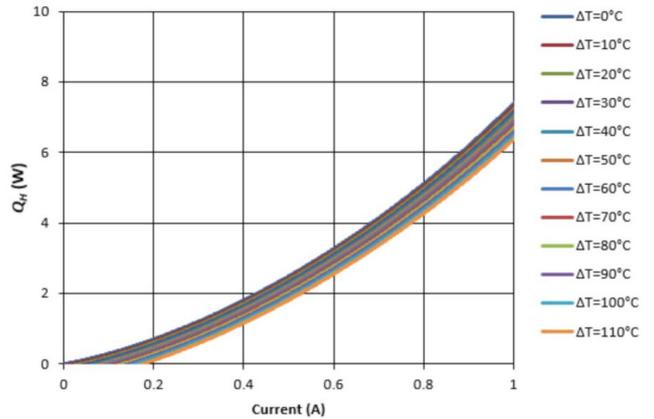


**Electrical and Thermal Performance**

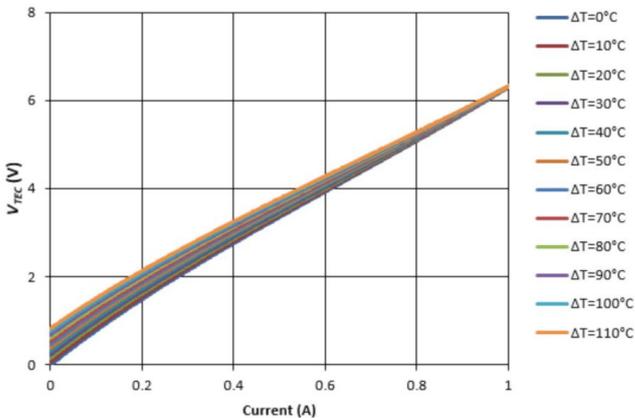
$Q_c$  vs.  $I$ ,  $T_H=27^\circ\text{C}$



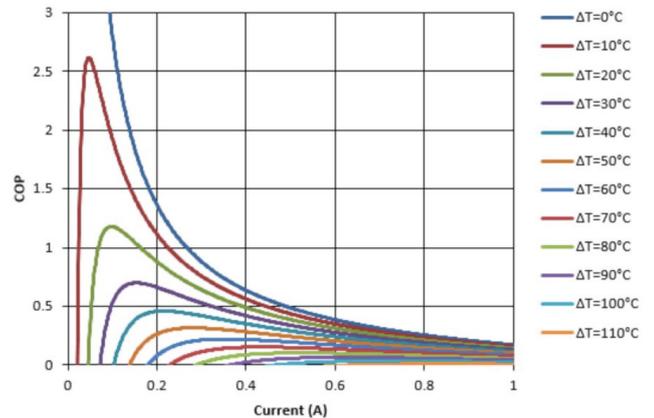
$Q_H$  vs.  $I$ ,  $T_H=27^\circ\text{C}$



$V_{TEC}$  vs.  $I$ ,  $T_H=27^\circ\text{C}$



COP vs.  $I$ ,  $T_H=27^\circ\text{C}$



## Specifications

<b>Hot Side Temperature</b>	<b>27.0 °C</b>	<b>50.0 °C</b>
<b>Qcmax (<math>\Delta T = 0</math>)</b>	0.7 Watts	0.7 Watts
<b><math>\Delta T_{max}</math> (<math>Q_c = 0</math>)</b>	121.0°C	139.3°C
<b>I<sub>max</sub> (I @ <math>\Delta T_{max}</math>)</b>	0.9 Amps	0.9 Amps
<b>V<sub>max</sub> (V @ <math>\Delta T_{max}</math>)</b>	5.6 Volts	6.4 Volts
<b>Module Resistance</b>	6.16 Ohms	6.16 Ohms
<b>Max Operating Temperature</b>	120 °C	
<b>Weight</b>	0.5 gram(s)	

## Finishing Options

<b>Suffix</b>	<b>Thickness</b>	<b>Flatness / Parallelism</b>	<b>Hot Face</b>	<b>Cold Face</b>	<b>Lead Length</b>
11	5.372 ±0.100 mm 0.211 ± 0.004 in	0.051 mm / 0.051 mm 0.002 in / 0.002 in	Lapped	Lapped	50.0 mm 1.97 in

## Notes

1. Max operating temperature: 120°C
2. Do not exceed I<sub>max</sub> or V<sub>max</sub> when operating module
3. Reference assembly guidelines for recommended installation
4. Solder tinning also available on metallized ceramics

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