

**OptoTEC™ MSX Series Thermoelectric Cooler**

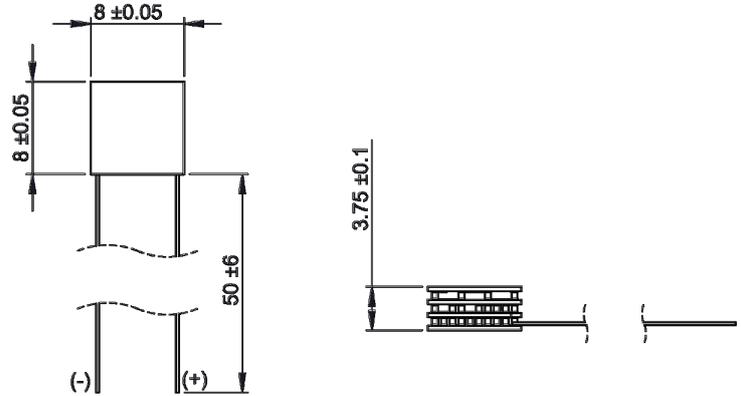
The MSX3-070-F1N-0808-06-11-W2 is a high-performance, miniature thermoelectric cooler. The MSX3-070-F1N-0808-06-11-W2 is primarily used in applications to stabilize the temperature of sensitive optical components in the telecom and photonics industries. It has a maximum  $Q_c$  of 1.253 Watts when  $\Delta T = 0$  and a maximum  $\Delta T$  of 119 °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

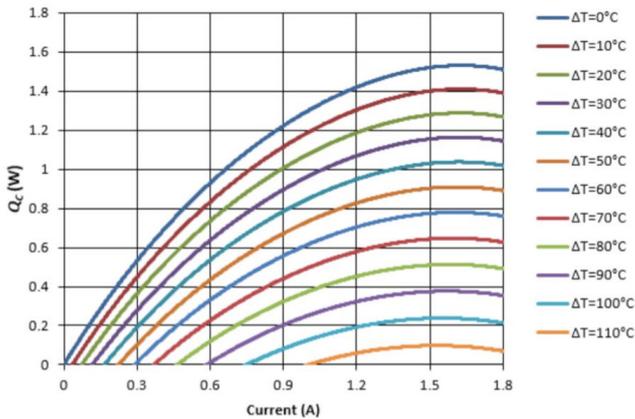
**Applications**

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

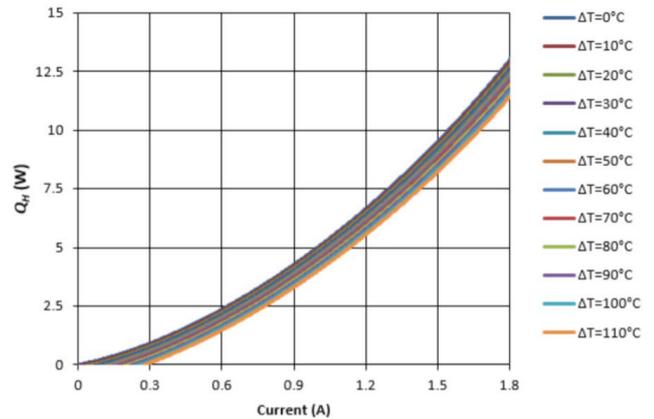


**Electrical and Thermal Performance**

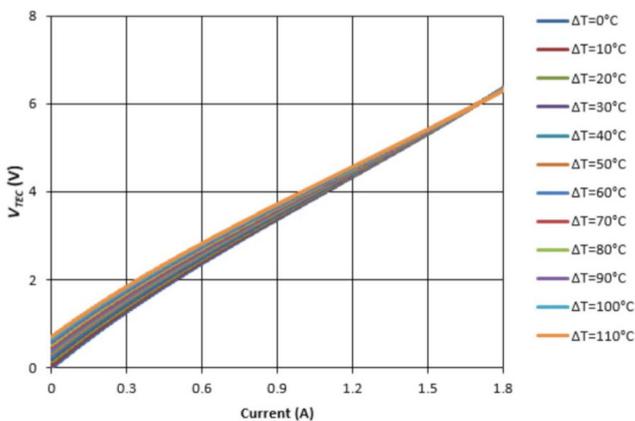
$Q_c$  vs.  $I$ ,  $T_H=27^\circ\text{C}$



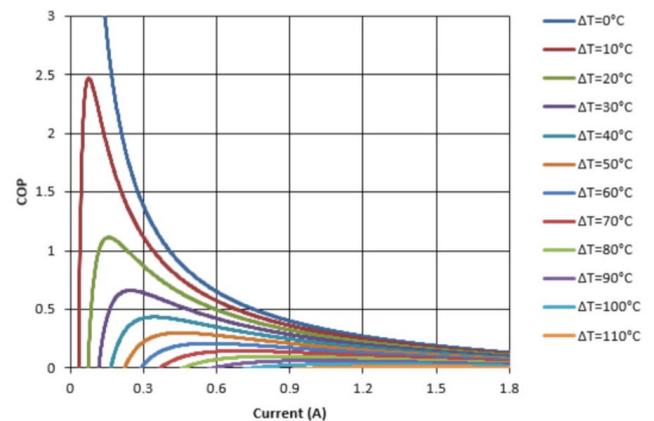
$Q_H$  vs.  $I$ ,  $T_H=27^\circ\text{C}$



$V_{TEC}$  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>	1.3 Watts	1.4 Watts
<b><math>\Delta T_{max}</math> (<math>Q_c = 0</math>)</b>	119.0°C	137.6°C
<b>I<sub>max</sub> (I @ <math>\Delta T_{max}</math>)</b>	1.7 Amps	1.6 Amps
<b>V<sub>max</sub> (V @ <math>\Delta T_{max}</math>)</b>	5.6 Volts	6.4 Volts
<b>Module Resistance</b>	3.25 Ohms	3.25 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	3.752 ±0.100 mm 0.148 ± 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

Any information furnished by Tark Thermal Solutions and its agents, whether in specifications, data sheets, product catalogues or otherwise, is believed to be (but is not warranted as being) accurate and reliable, is provided for information only and does not form part of any contract with Tark Thermal Solutions. All specifications are subject to change without notice. Tark Thermal Solutions assumes no responsibility and disclaims all liability for losses or damages resulting from use of or reliance on this information. All Tark products are sold subject to the Tark Thermal Solutions Terms and Conditions of sale (including Tark's limited warranty) in effect from time to time, a copy of which will be furnished upon request.

© Copyright 2026 Tark Thermal Solutions, Inc. All rights reserved.

Revision: 00 Date: 01-24-2026

Print Date: 02-05-2026