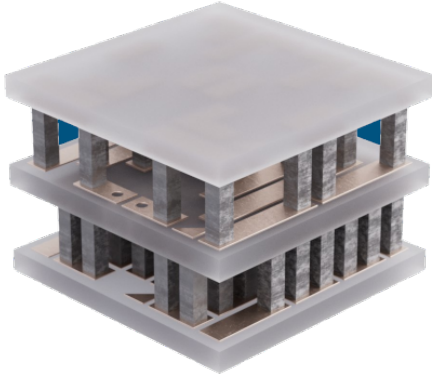


OptoTEC™ MSX Series Thermoelectric Cooler

The MSX2-041-F1N-0707-15-11-W2 is a high-performance, miniature thermoelectric cooler. The MSX2-041-F1N-0707-15-11-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 0.514 Watts when $\Delta T = 0$ and a maximum ΔT of 101 °C at $Q_c = 0$.

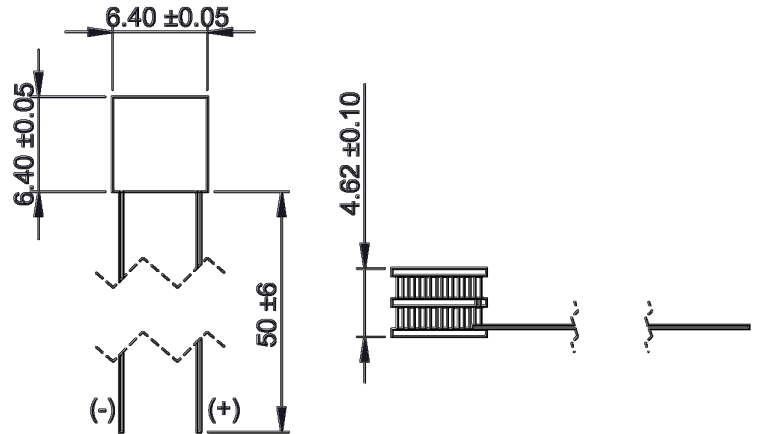


Features

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

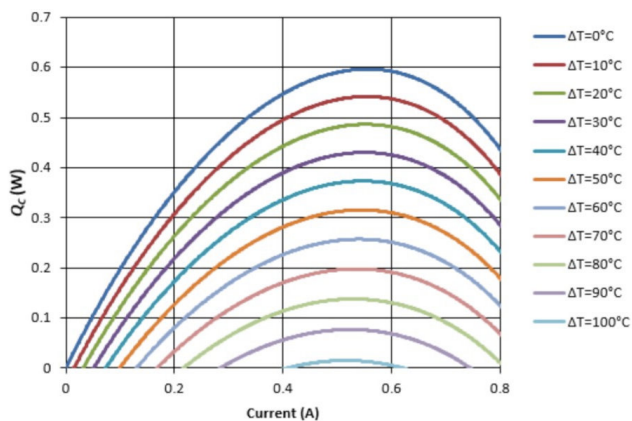
Applications

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

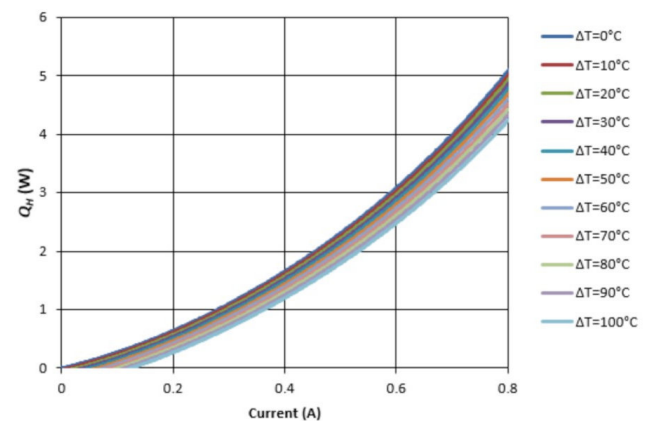


Electrical and Thermal Performance

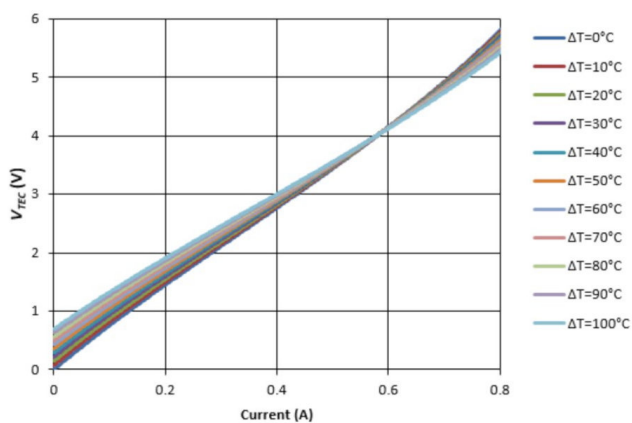
Q_C vs. I , $T_H=27^\circ\text{C}$



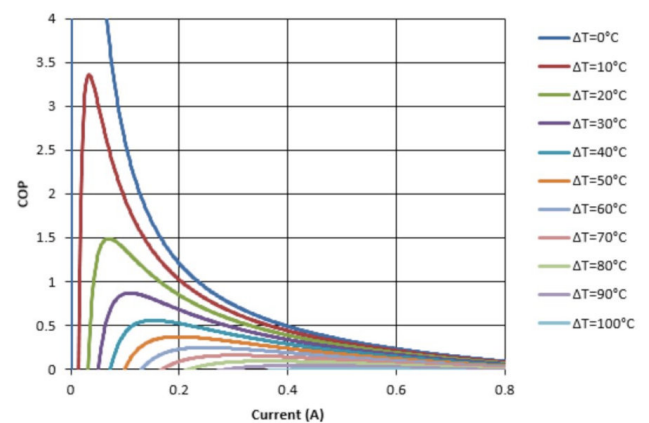
Q_H vs. I , $T_H=27^\circ\text{C}$



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



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



Specifications

Hot Side Temperature	27.0 °C	50.0 °C
Qcmax (ΔT = 0)	0.5 Watts	0.6 Watts
ΔTmax (Qc = 0)	101.0°C	115.6°C
Imax (I @ ΔTmax)	0.5 Amps	0.4 Amps
Vmax (V @ ΔTmax)	3.6 Volts	4.1 Volts
Module Resistance	7.63 Ohms	7.63 Ohms
Max Operating Temperature	120 °C	
Weight	0.5 gram(s)	

Finishing Options

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
11	4.620 ±0.100 mm 0.182 ± 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_{max} or V_{max} 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