Multistage MS Series MS3-052-10-17-00-W8
MFG Part Number: 16068-304

Multistage MS Series Thermoelectric Cooler

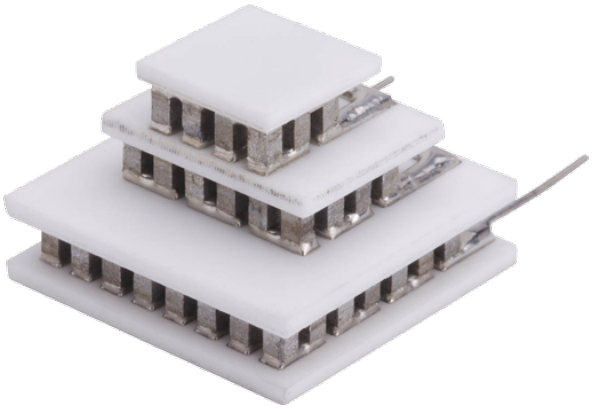
The MS3-052-10-17-00-W8 multistage thermoelectric cooler is able to reach colder temperatures than single stage thermoelectric coolers. It has a maximum Qc of 1.4 Watts when ΔT = 0 and a maximum ΔT of 108 °C at Qc = 0.

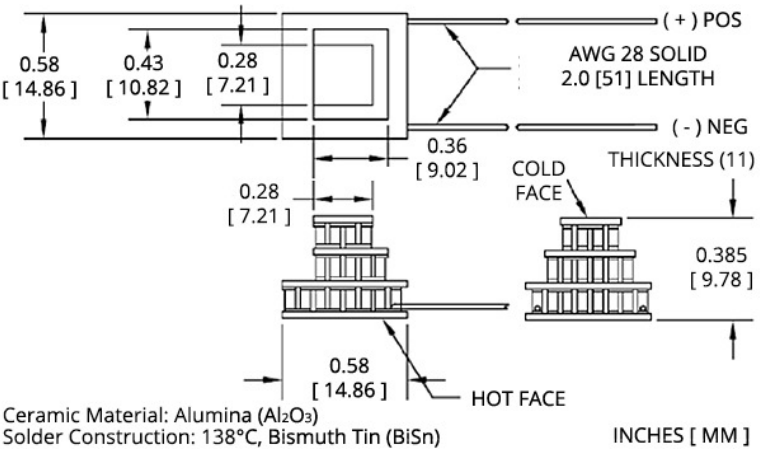
Features

- High temperature differential
- Precise temperature control
- Reliable solid-state operation
- Environmentally-friendly
- DC operation
- RoHS-compliant

Applications

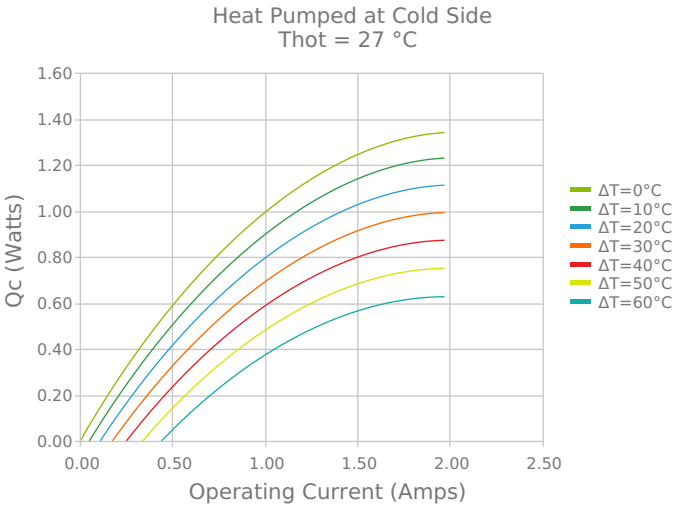
- Thermoelectric Cooling for CMOS Sensors
- Heads-Up Displays, Imaging Sensors

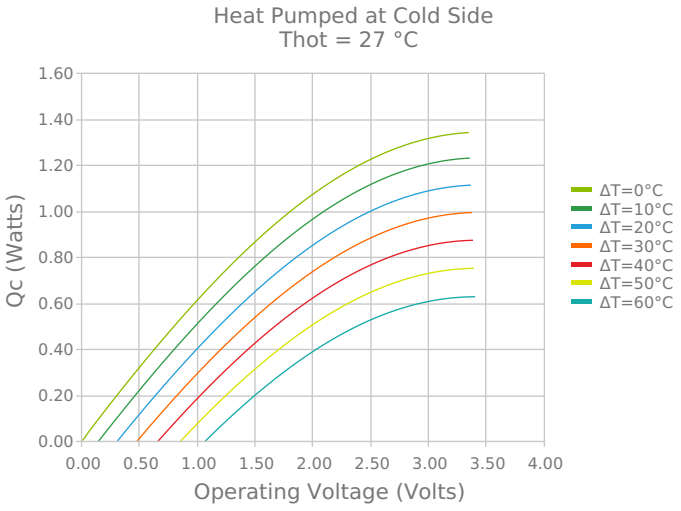


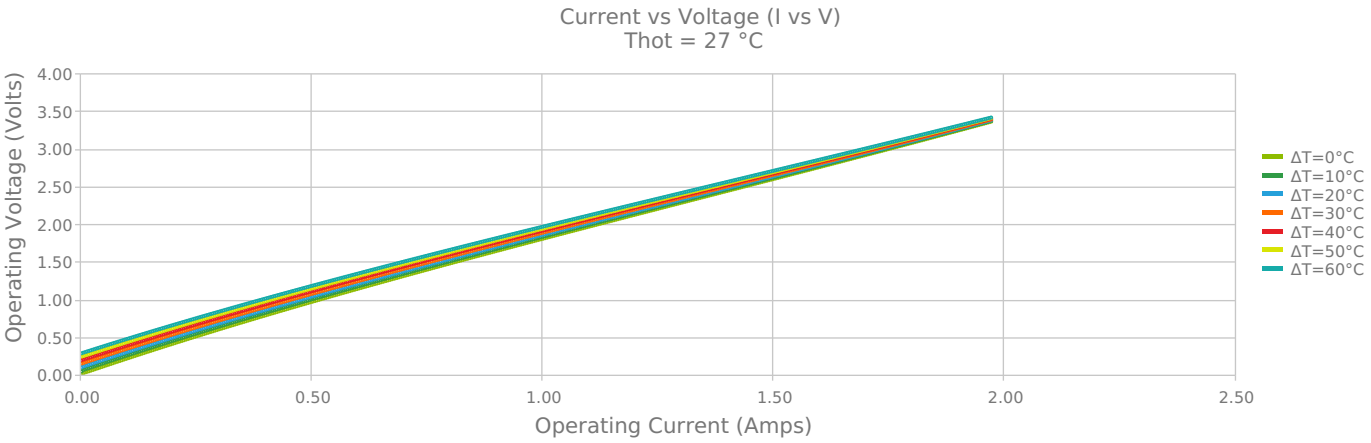


ELECTRICAL AND THERMAL PERFORMANCE

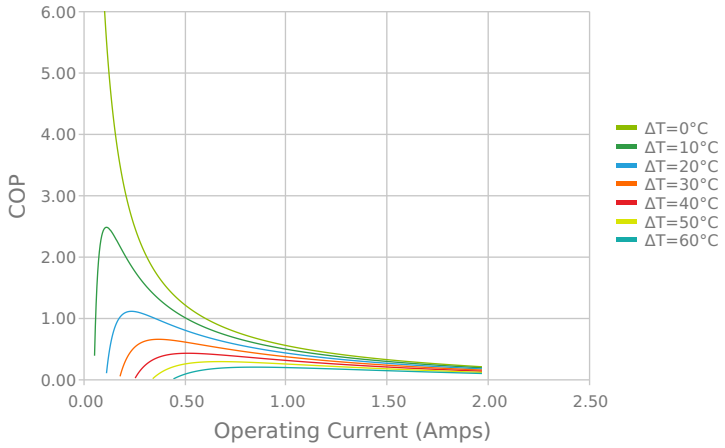
For maximum performance, be sure to orient the CONTROL side of the TEC against the application to be managed and the HEATSINK side against the heat sink or other heat rejection method. The CONTROL side is always opposite the side with lead attachments. Lead attachment is a passive heat loss and less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



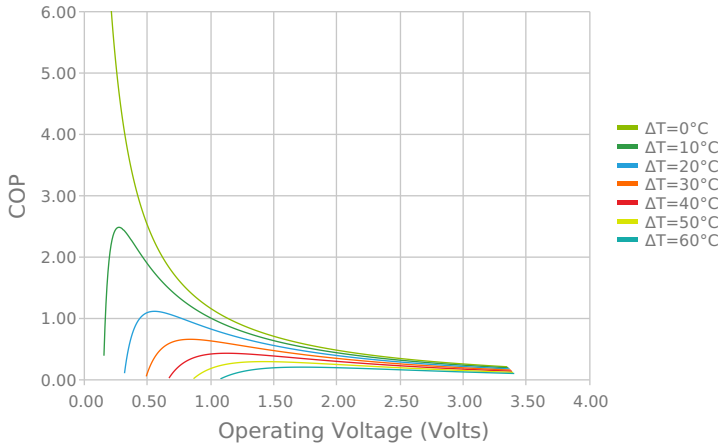




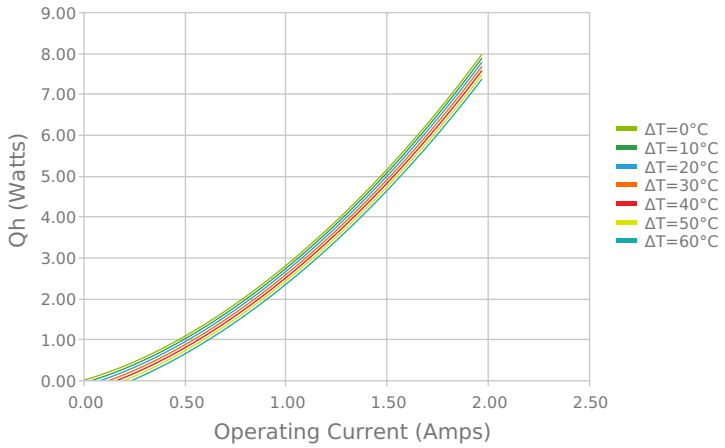
Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C



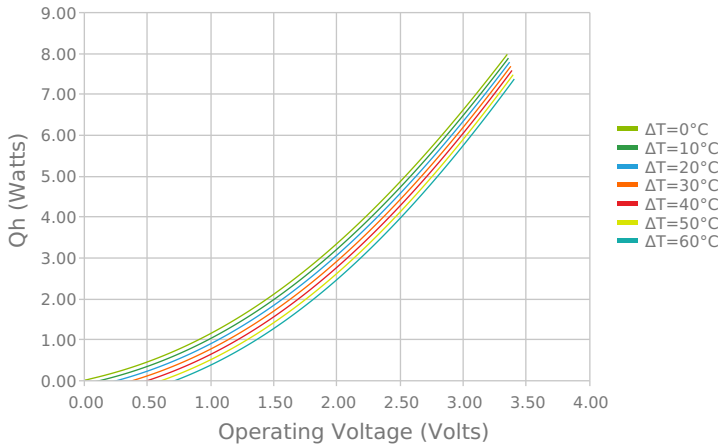
Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C



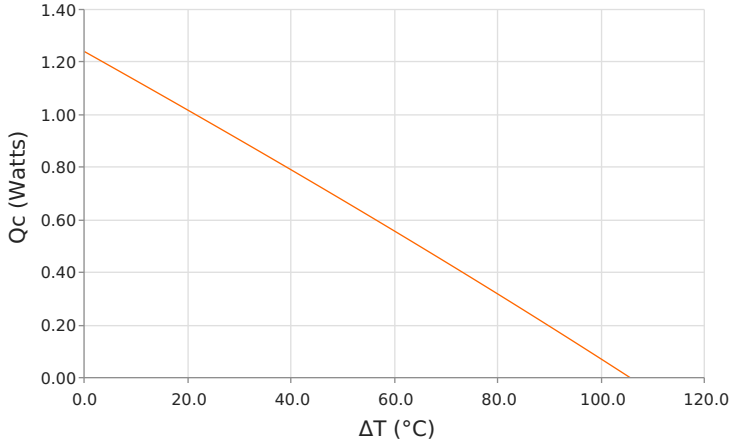
Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C



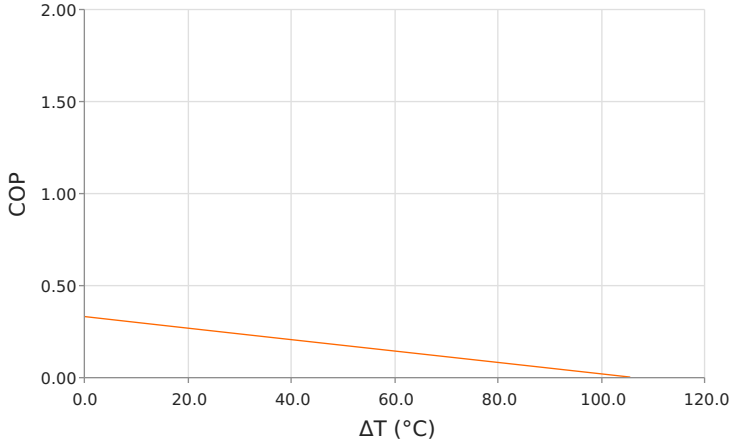
Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C



Heat Pumped at Cold Side (Qc)
Thot = 27 °C | Current = 1.5 Amps



Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C | Current = 1.5 Amps



SPECIFICATIONS*

Hot Side Temperature	**27.0 °C**
Qcmax (ΔT = 0)	1.4 Watts
ΔTmax (Qc = 0)	108.0 °C
Imax (I @ ΔTmax)	1.9 Amps
Vmax (V @ ΔTmax)	3.3 Volts
Module Resistance	1.74 Ohms
Max Operating Temperature	80 °C
Weight	11.0 gram(s)

* Specifications reflect thermoelectric coefficients updated March 2020

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
00	16.203 ±0.203 mm 0.638 ± 0.008 in	0.025 mm / 0.203 mm 0.001 in / 0.008 in	Metallized	Metallized	199.9 mm 7.87 in

SEALING OPTIONS

Suffix	Sealant	Color	Temp Range	Description
	None			No sealing specified

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

Revision: 00 Date: 06-01-2022

Print Date: 06-14-2022