Multistage MS Series MS2-190-10-10-12-12-11-RT-W8
MFG Part Number: 9340003-302

Multistage MS Series Thermoelectric Cooler

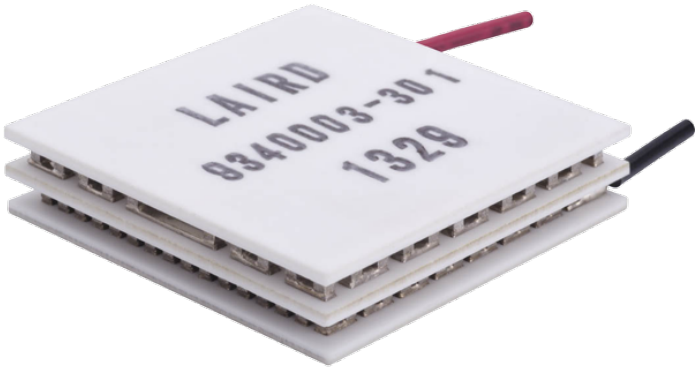
The MS2-190-10-10-12-12-11-RT-W8 multistage thermoelectric cooler is able to reach colder temperatures than single stage thermoelectric coolers. It has a maximum Qc of 15.4 Watts when ΔT = 0 and a maximum ΔT of 91 °C at Qc = 0.

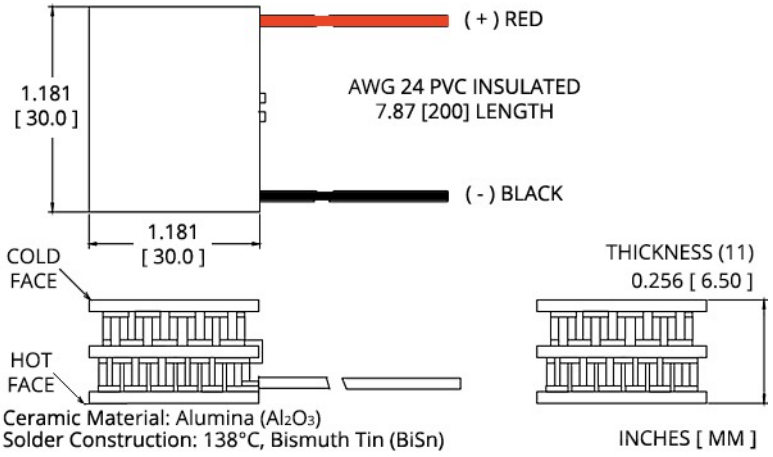
Features

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

Applications

- Thermoelectric Cooling for CMOS Sensors

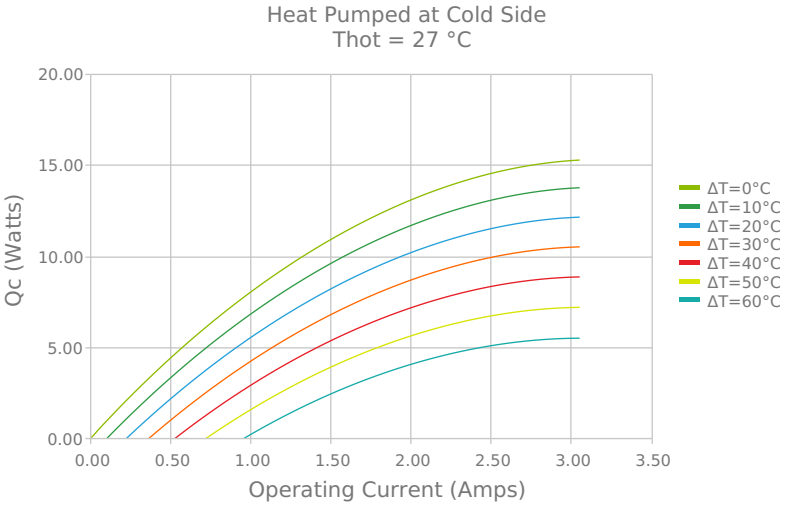


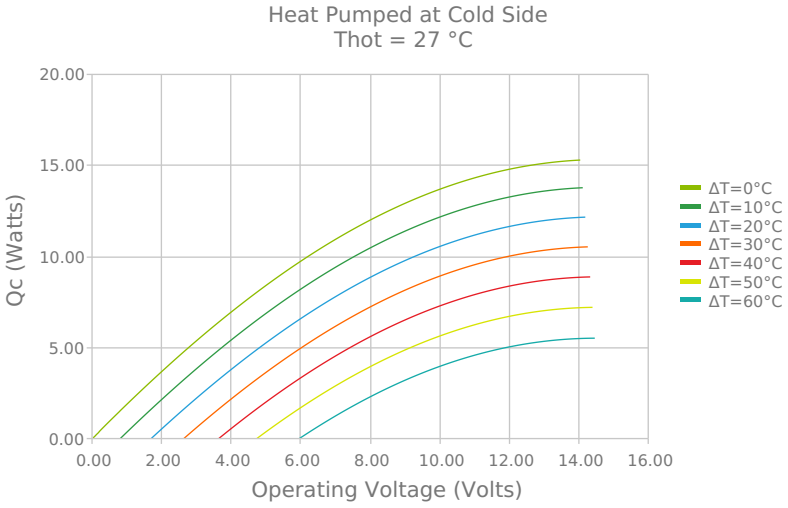


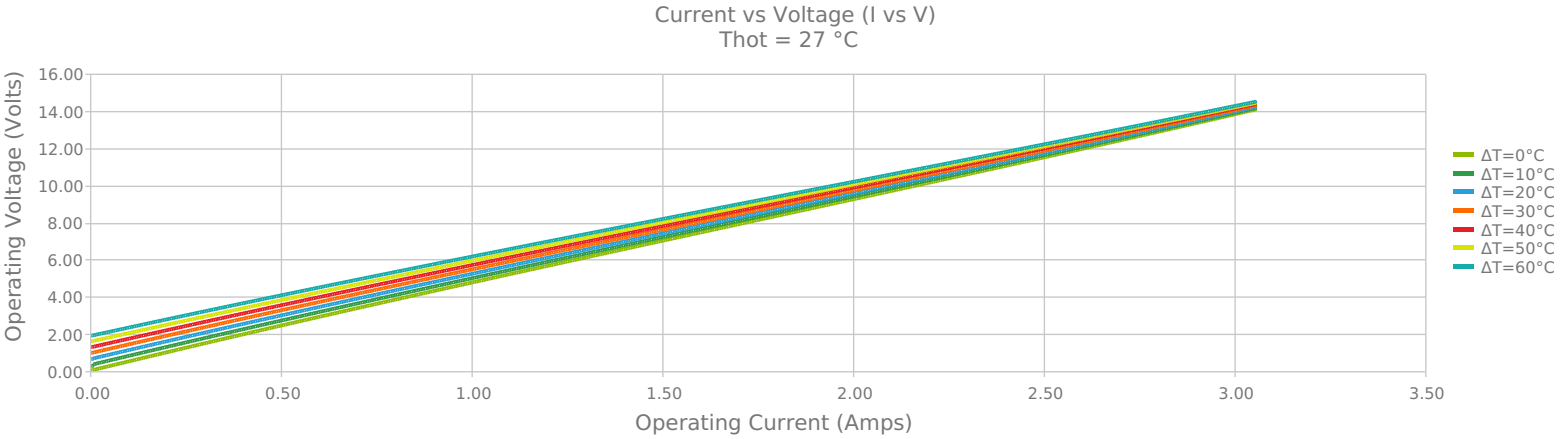
Electrical and Thermal Performance

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

For maximum performance, be sure to orient the CONTROL side of the TEC against the application to be managed and the AMBIENT 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.







Multistage MS Series MS2-190-10-10-12-12-11-RT-W8
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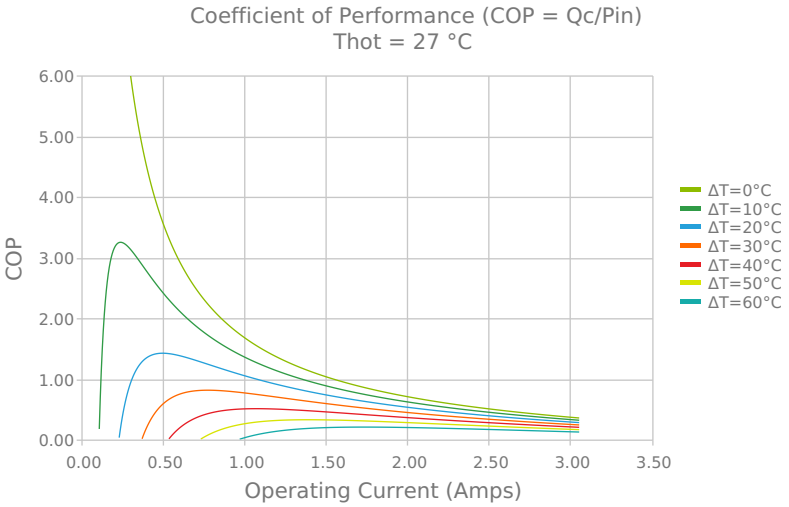

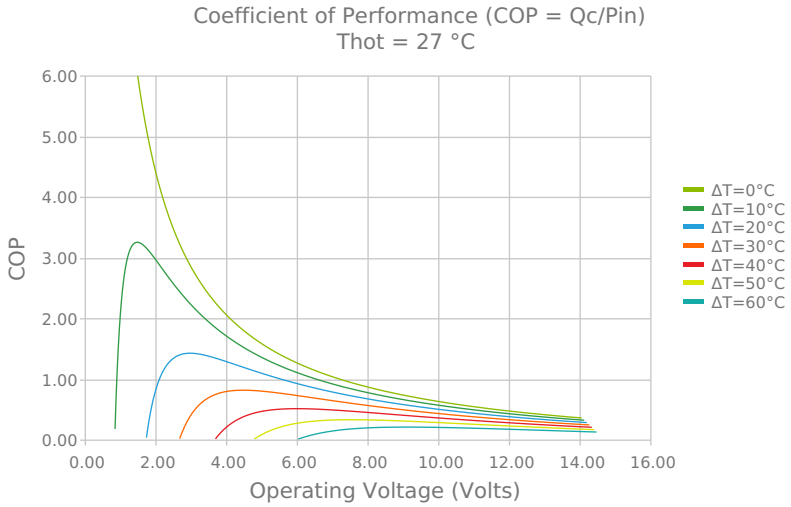

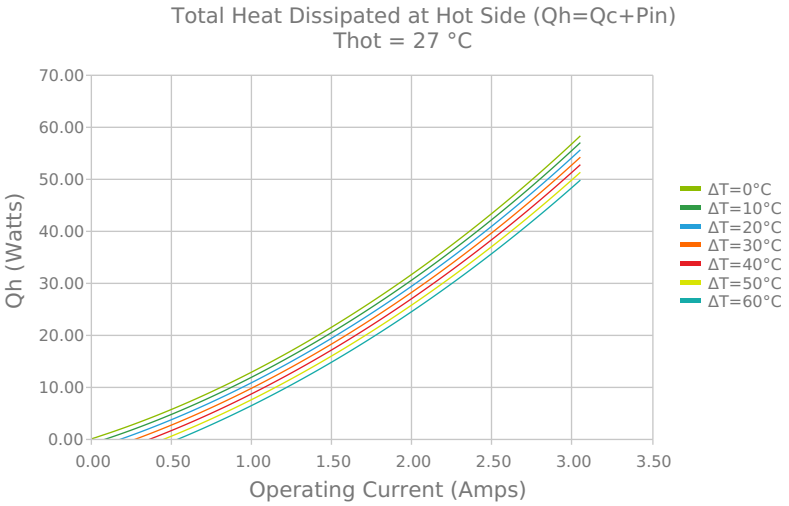

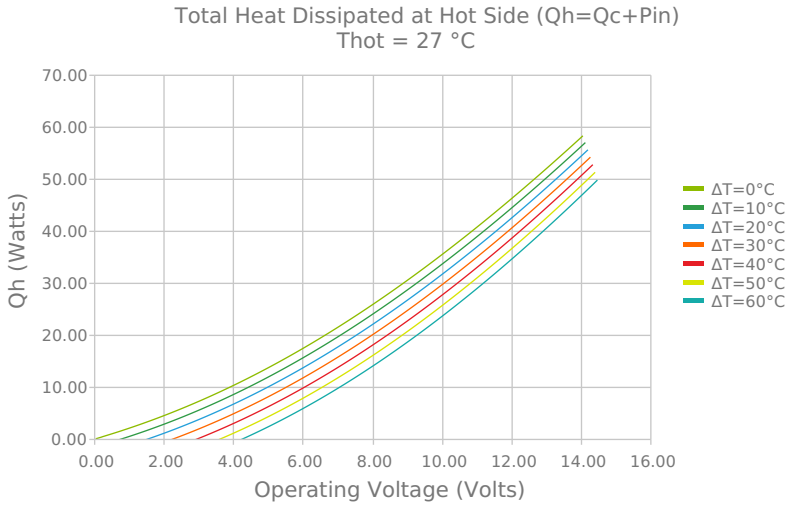

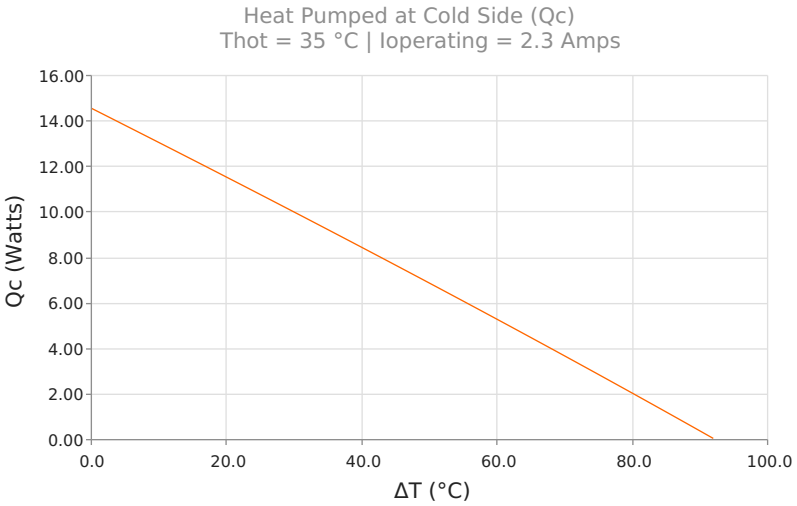

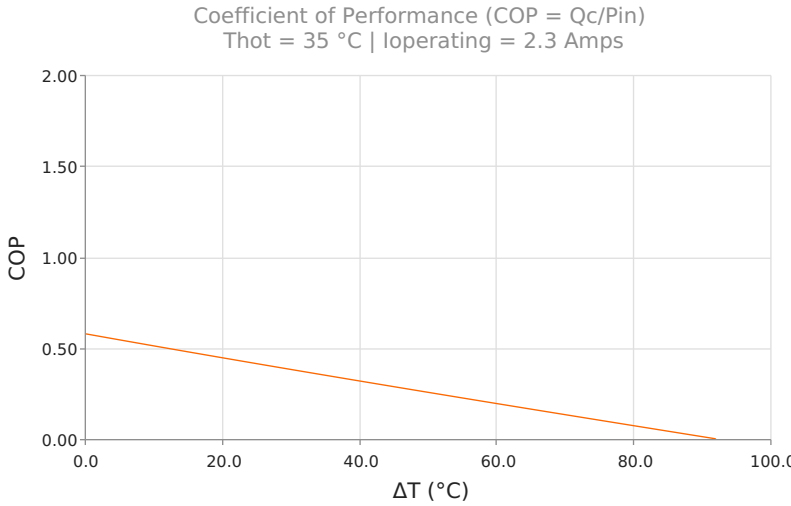

Specifications

Hot Side Temperature	**27.0 °C**
Qcmax (ΔT = 0)	15.4 Watts
ΔTmax (Qc = 0)	91.0 °C
Imax (I @ ΔTmax)	3.0 Amps
Vmax (V @ ΔTmax)	14.3 Volts
Module Resistance	4.85 Ohms
Max Operating Temperature	80 °C
Weight	18.0 gram(s)

Finishing Options

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
11	6.500 ±0.203 mm 0.256 ± 0.008 in	0.025 mm / 0.203 mm 0.001 in / 0.008 in	Lapped	Lapped	199.9 mm 7.87 in

Sealing Options

Suffix	Sealant	Color	Temp Range	Description
RT	RTV	Translucent or White	-60 to 204°C	Non-corrosive, silicone adhesive

Notes

Max operating temperature: 80°C
Do not exceed Imax or Vmax when operating module
Reference assembly guidelines for recommended installation
Solder tinning also available on metallized ceramics

Revision: 00 Date: 06-01-2022

Print Date: 05-29-2025