Annular SH Series Thermoelectric Cooler

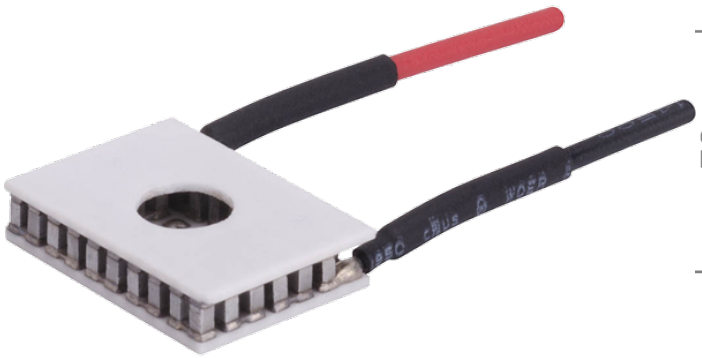
The SH14-15-06-L-W4.5 is an annular-style thermoelectric cooler. The hot and cold side ceramics have a circular hole in the center to accommodate light protrusion for optics, mechanical fastening or temperature probe. It has a maximum Qc of 5.8 Watts when ΔT = 0 and a maximum ΔT of 70.5 °C at Qc = 0.

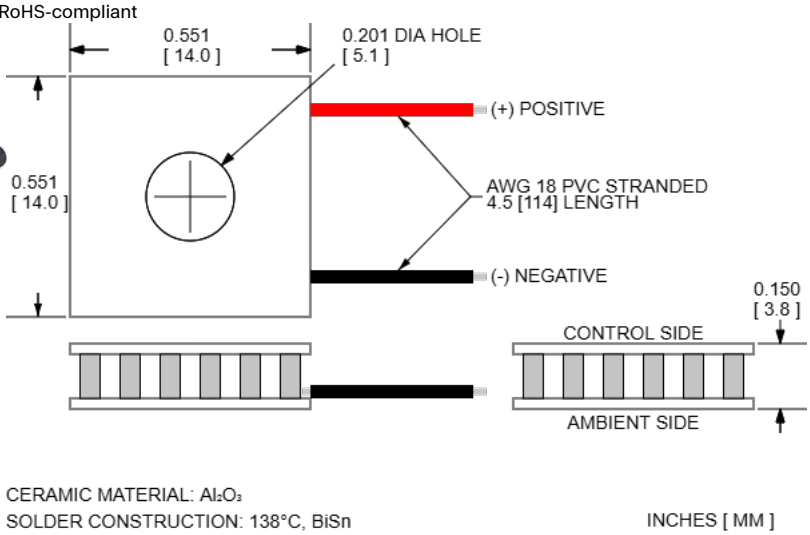
Features

- Center Hole
- Precise Temperature Control
- No sound or vibration
- Reliable solid-state
- DC Operation
- RoHS-compliant

Applications

- Thermoelectric Coolers for Reagent Storage
- Thermoelectric Coolers for Handheld Cosmetic Lasers
- Cooling for Centrifuges
- Peltier Cooling for Machine Vision



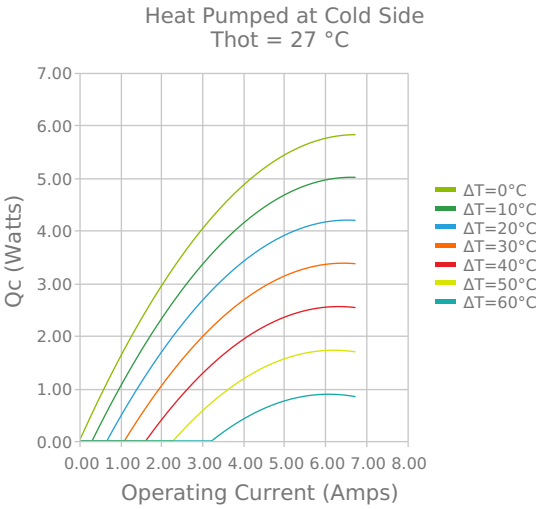


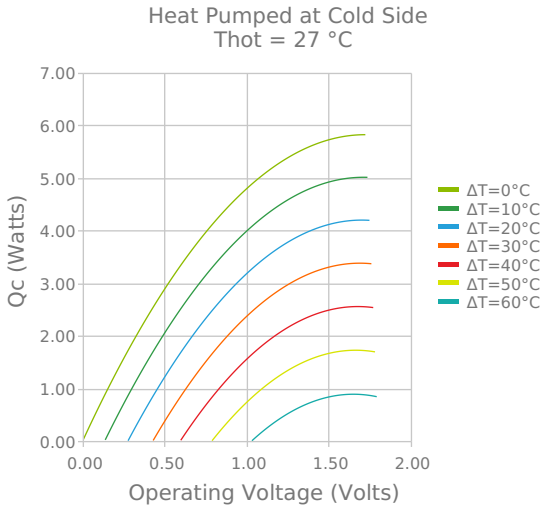
CERAMIC MATERIAL: Al_2O_3
SOLDER CONSTRUCTION: 138°C, BiSn

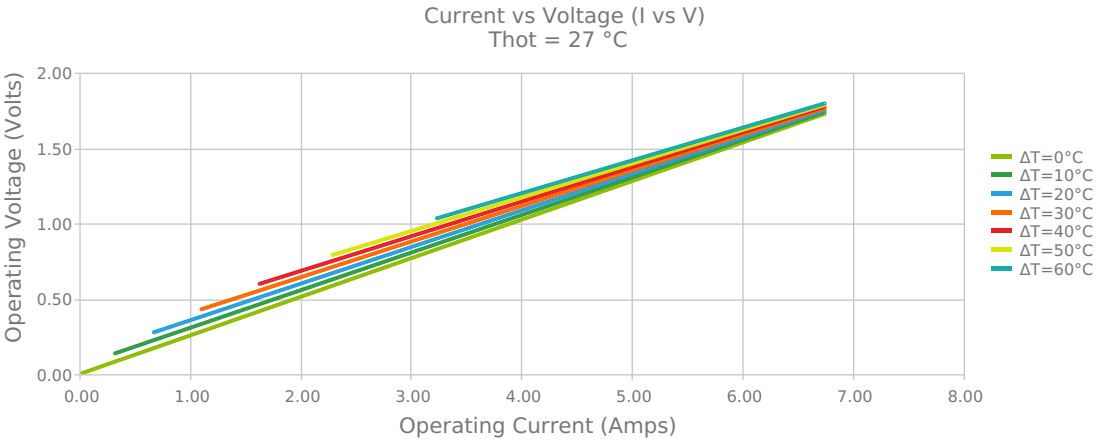
INCHES [MM]

Electrical and Thermal Performance

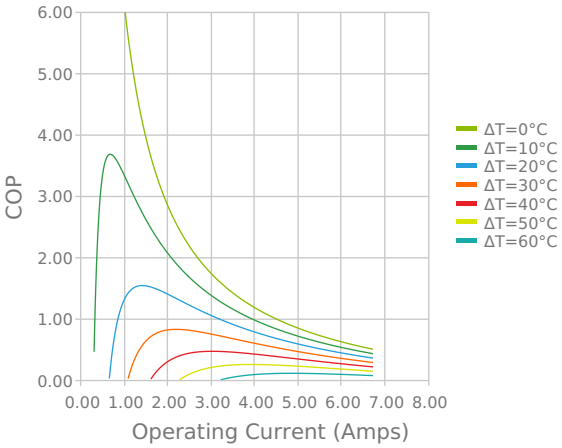
For maximum performance, be sure to orient the CONTROL side of the TEC against the application to be managed and the AMBIENT side against the heat sink or other heat rejection method. The CONTROL side is always opposite the side with lead attachments. Lead attachment is a passive heat loss and less impactful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







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



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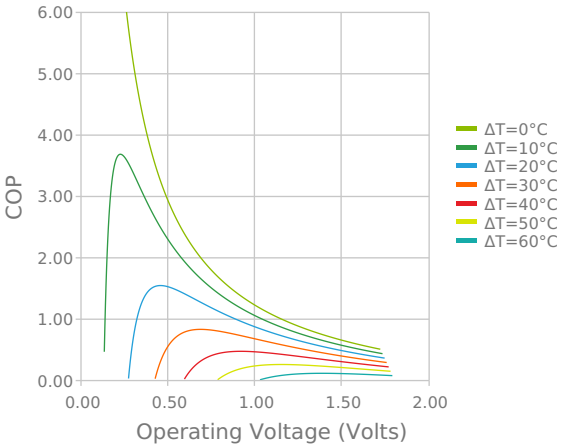
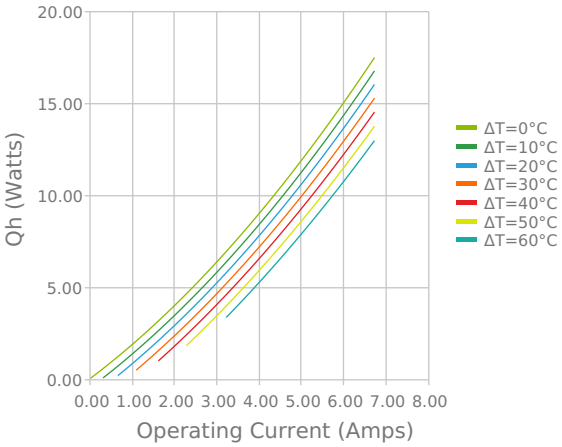


Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C



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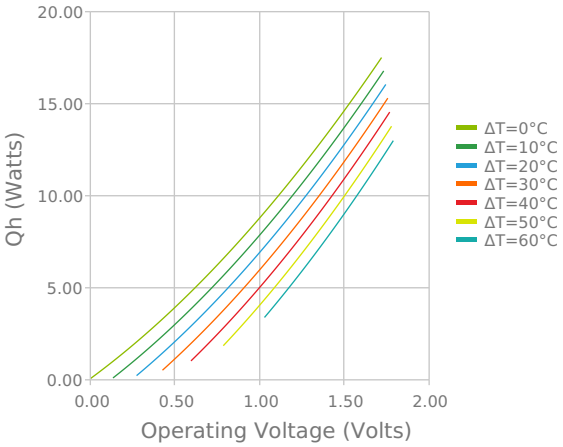
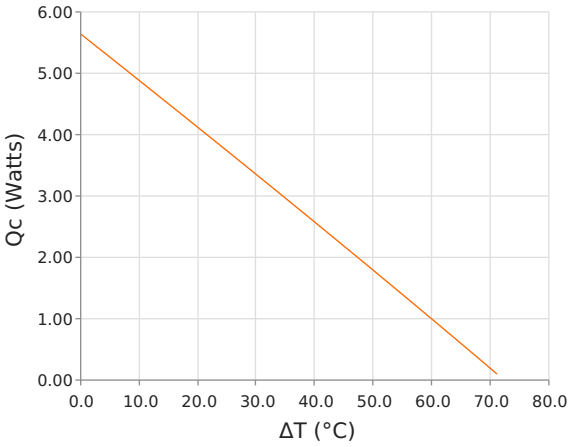
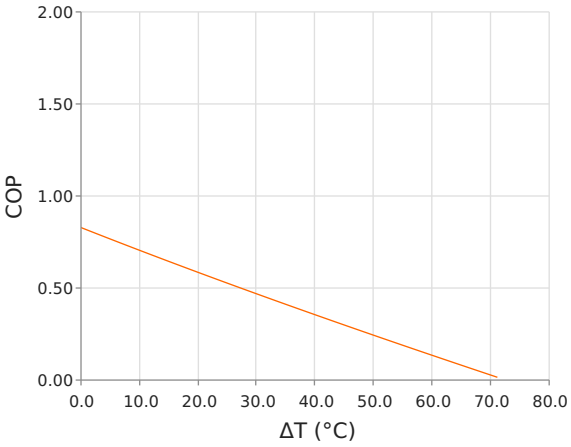


Heat Pumped at Cold Side (Qc)
Thot = 35 °C | Ioperating = 5.1 Amps



Coefficient of Performance (COP = Qc/Pin)
Thot = 35 °C | Ioperating = 5.1 Amps



Specifications

Hot Side Temperature	**27.0 °C**	**35.0 °C**	**50.0 °C**
Qcmax (ΔT = 0)	5.8 Watts	6.0 Watts	6.3 Watts
ΔTmax (Qc = 0)	70.5°C	73.5°C	78.8°C
Imax (I @ ΔTmax)	6.0 Amps	5.9 Amps	5.9 Amps
Vmax (V @ ΔTmax)	1.6 Volts	1.7 Volts	1.8 Volts
Module Resistance	0.26 Ohms	0.27 Ohms	0.29 Ohms
Max Operating Temperature	80 °C		
Weight	5.0 gram(s)		

Finishing Options

Suffix	**Thickness**	**Flatness / Parallelism**	**Hot Face**	**Cold Face**	**Lead Length**
L	3.810 ±0.254 mm 0.150 ± 0.0100 in	0.004 mm / 0.004 mm 0.00015 in / 0.00015 in	Lapped	Lapped	114.3 mm 4.50 in

Sealing Options

Suffix	**Sealant**	**Color**	**Temp Range**	**Description**
	None			No sealing specified

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: 05-16-2025