

ZT Series Thermoelectric Cooler

Note: This product is not recommended for new designs.

This product series has been replaced with the HiTemp ETX Series.

The recommended replacement is:

Description: ETX4-7-F1-2020-TA-W8

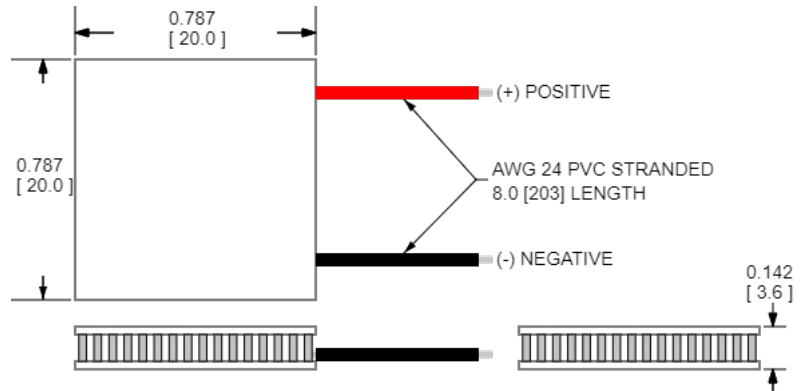


Features

- High temperature differential
- Precise temperature control
- Reliable solid-state operation
- No sound or vibration
- DC operation
- RoHS-compliant

Applications

- Peltier Cooling for Refrigerated Centrifuges
- Peltier Cooling for Machine Vision
- Thermoelectric Cooling for CMOS Sensors
- Cooling Solutions for Autonomous Systems
- Peltier Cooling for Digital
- Light Processors



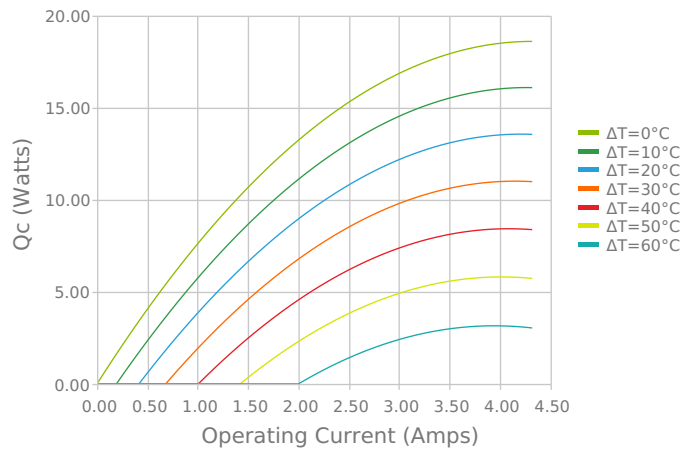
CERAMIC MATERIAL: Al_2O_3

SOLDER CONSTRUCTION: 138°C, BiSn

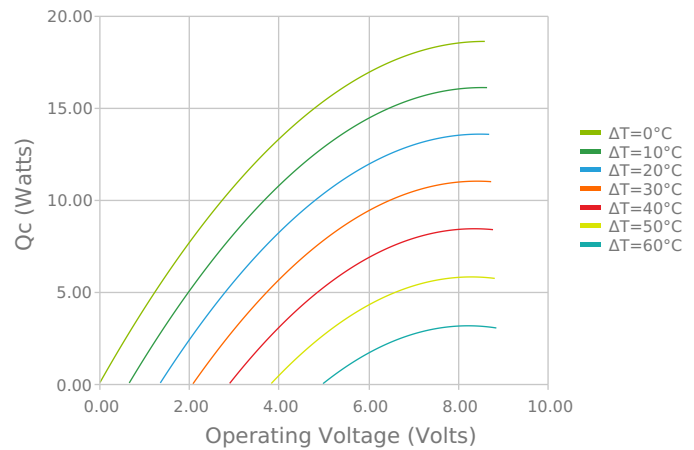
INCHES [MM]

ELECTRICAL AND THERMAL PERFORMANCE

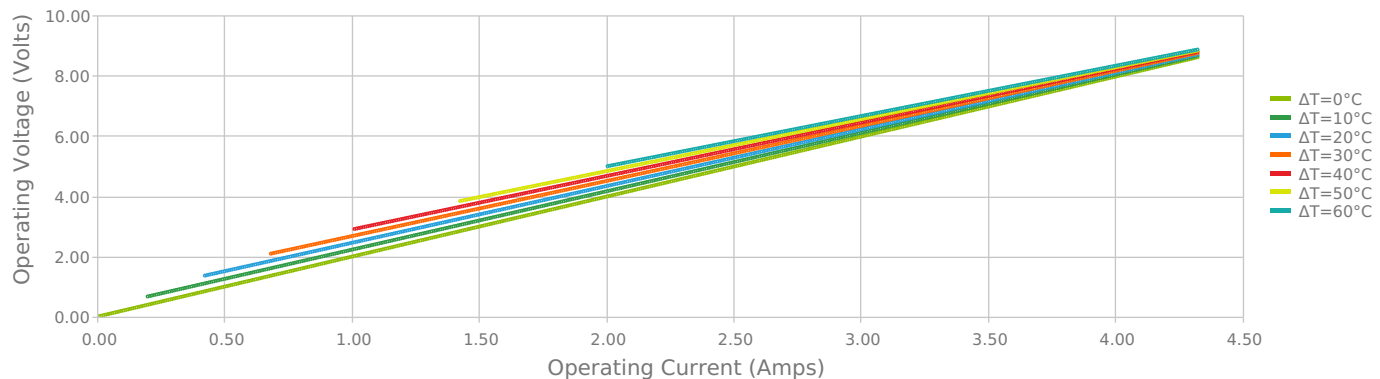
Heat Pumped at Cold Side
 $T_{\text{hot}} = 27^\circ\text{C}$



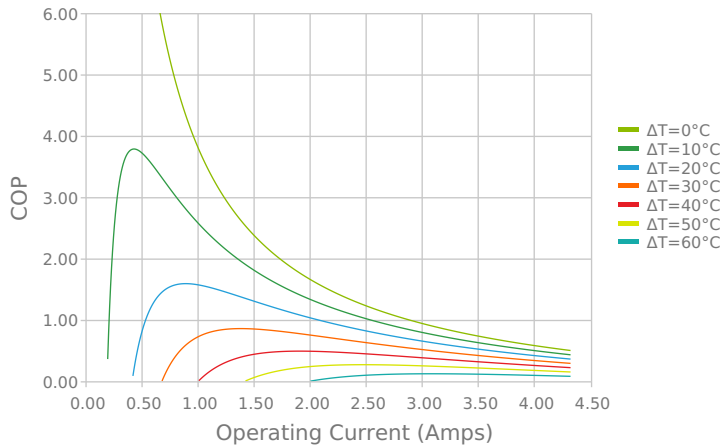
Heat Pumped at Cold Side
 $T_{\text{hot}} = 27^\circ\text{C}$



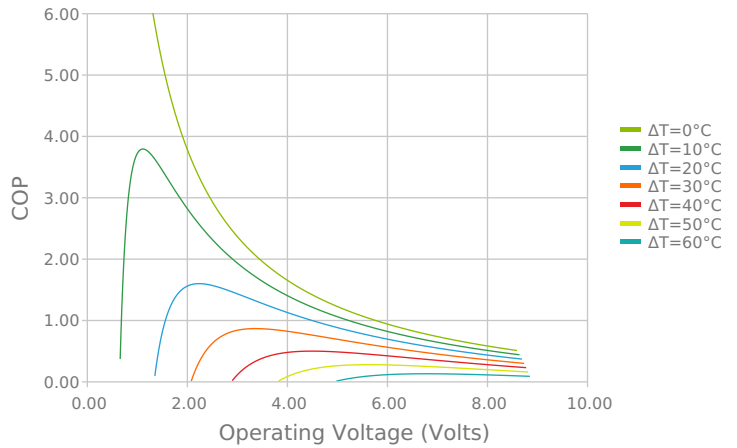
Current vs Voltage (I vs V)
 $T_{\text{hot}} = 27^\circ\text{C}$



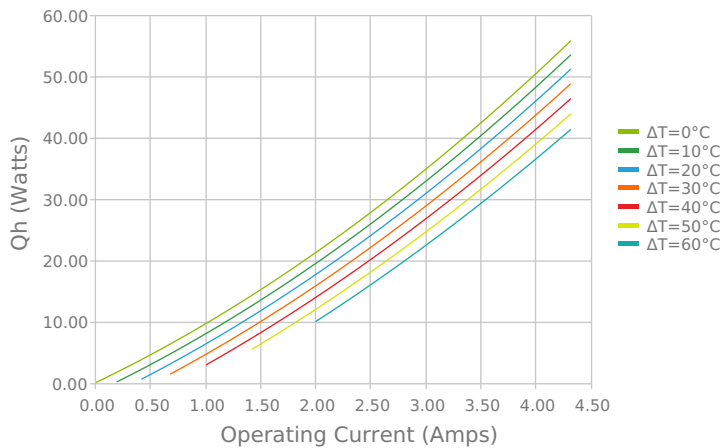
Coefficient of Performance (COP = Q_c/P_{in})
 $T_{hot} = 27\text{ }^{\circ}\text{C}$



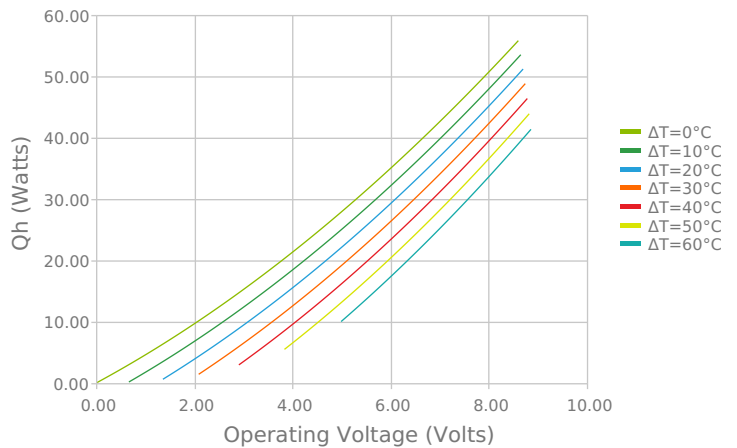
Coefficient of Performance (COP = Q_c/P_{in})
 $T_{hot} = 27\text{ }^{\circ}\text{C}$



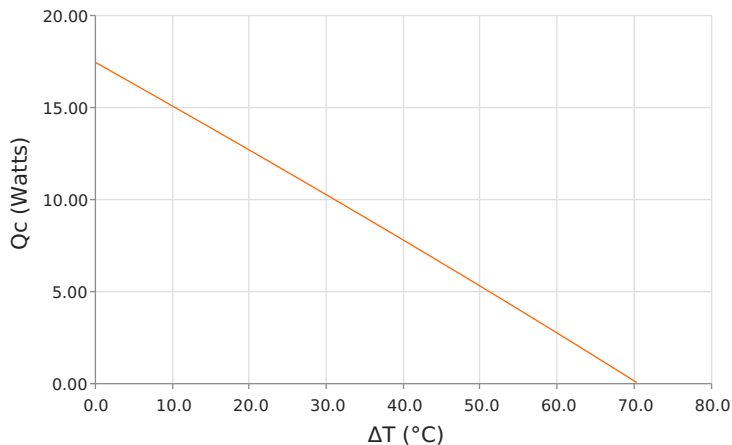
Total Heat Dissipated at Hot Side ($Q_h=Q_c+P_{in}$)
 $T_{hot} = 27\text{ }^{\circ}\text{C}$



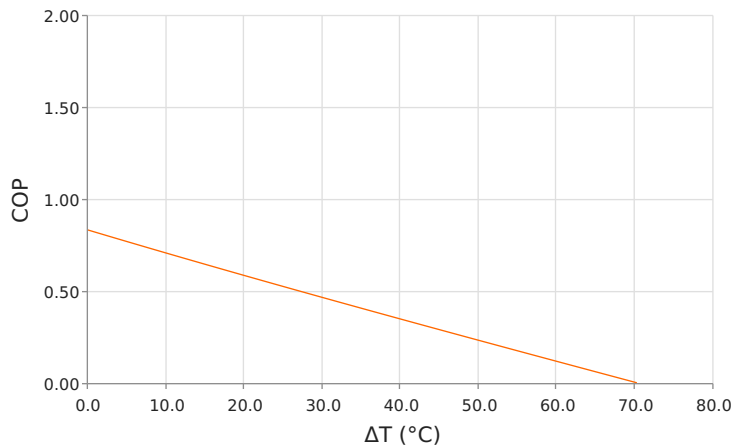
Total Heat Dissipated at Hot Side ($Q_h=Q_c+P_{in}$)
 $T_{hot} = 27\text{ }^{\circ}\text{C}$



Heat Pumped at Cold Side (Q_c)
 $T_{hot} = 27\text{ }^{\circ}\text{C}$ | Current = 3.2 Amps



Coefficient of Performance (COP = Q_c/P_{in})
 $T_{hot} = 27\text{ }^{\circ}\text{C}$ | Current = 3.2 Amps



SPECIFICATIONS*

Hot Side Temperature

Qcmax ($\Delta T = 0$)

ΔT_{max} ($Q_c = 0$)

I_{max} (I @ ΔT_{max})

V_{max} (V @ ΔT_{max})

Module Resistance

Max Operating Temperature

Weight

	27.0 °C	35.0 °C	50.0 °C
Qcmax ($\Delta T = 0$)	18.6 Watts	19.1 Watts	20.0 Watts
ΔT_{max} ($Q_c = 0$)	71.7°C	74.8°C	80.4°C
I _{max} (I @ ΔT_{max})	3.9 Amps	3.8 Amps	3.8 Amps
V _{max} (V @ ΔT_{max})	8.1 Volts	8.5 Volts	9.0 Volts
Module Resistance	1.99 Ohms	2.08 Ohms	2.24 Ohms
Max Operating Temperature	80 °C		
Weight	7.0 gram(s)		

* Specifications reflect thermoelectric coefficients updated March 2020

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
TA	3.610 ±0.025 mm 0.142 ± 0.0010 in	0.025 mm / 0.025 mm 0.001 in / 0.001 in	Lapped	Lapped	203.2 mm 8.00 in

SEALING OPTIONS

Suffix	Sealant	Color	Temp Range	Description
	None			No sealing specified

NOTES

1. Max operating temperature: 80°C
2. Do not exceed I_{max} or V_{max} when operating module
3. Reference assembly guidelines for recommended installation

Any information furnished by Laird 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 Laird. All specifications are subject to change without notice. Laird assumes no responsibility and disclaims all liability for losses or damages resulting from use of or reliance on this information. All Laird products are sold subject to the Laird Terms and Conditions of sale (including Laird's limited warranty) in effect from time to time, a copy of which will be furnished upon request.

© Copyright 2019-2021 Laird Thermal Systems, Inc. All rights reserved. Laird™, the Laird Ring Logo, and Laird Thermal Systems™ are trademarks or registered trademarks of Laird Limited or its subsidiaries.

Date: 01/08/2022