

PowerCycling PC Series Thermoelectric Cooler

Note: This product is not recommended for new designs.

This product series has been replaced with the PowerCycling PCX Series.

The recommended replacement is:

MFG Part Number: 387005676

Description: PCX5-16-F1-4040-TA-W6

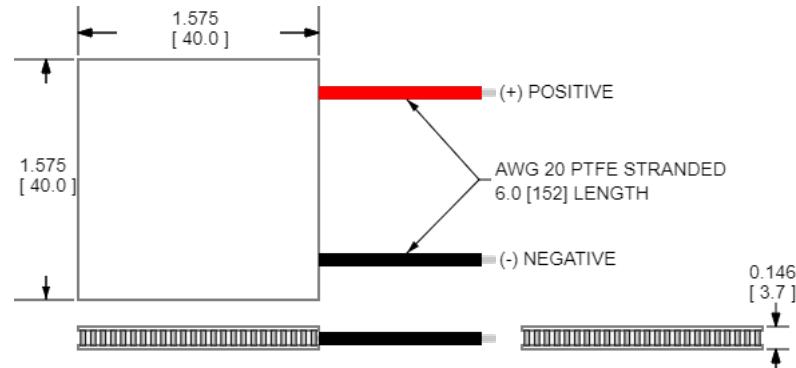


Features

- High thermal cycling capability
- Precise temperature control
- Reliable solid-state operation
- No sound or vibration
- RoHS-compliant

Applications

- Thermoelectric Modules Accelerate PCR Thermal Cycling
- DNA Amplification (PCR)

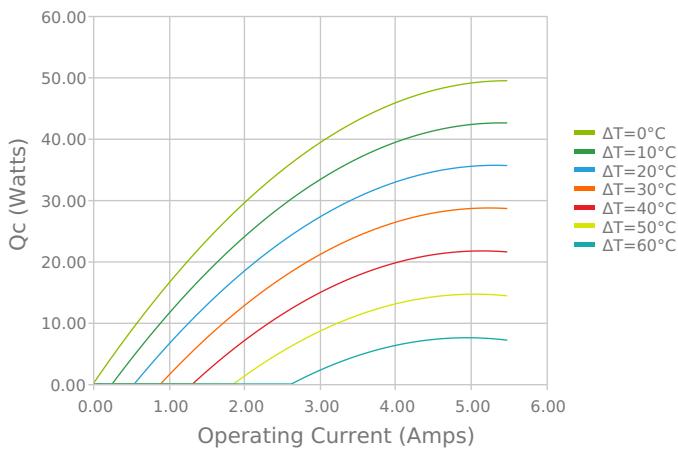


CERAMIC MATERIAL: Al_2O_3
SOLDER CONSTRUCTION: 232°C, SbSn

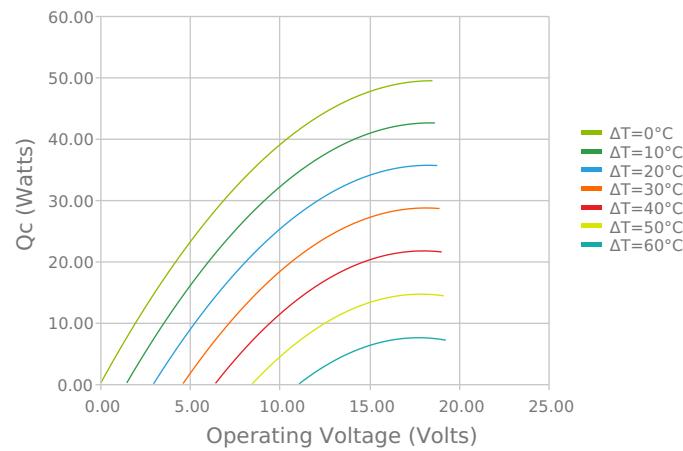
INCHES [MM]

ELECTRICAL AND THERMAL PERFORMANCE

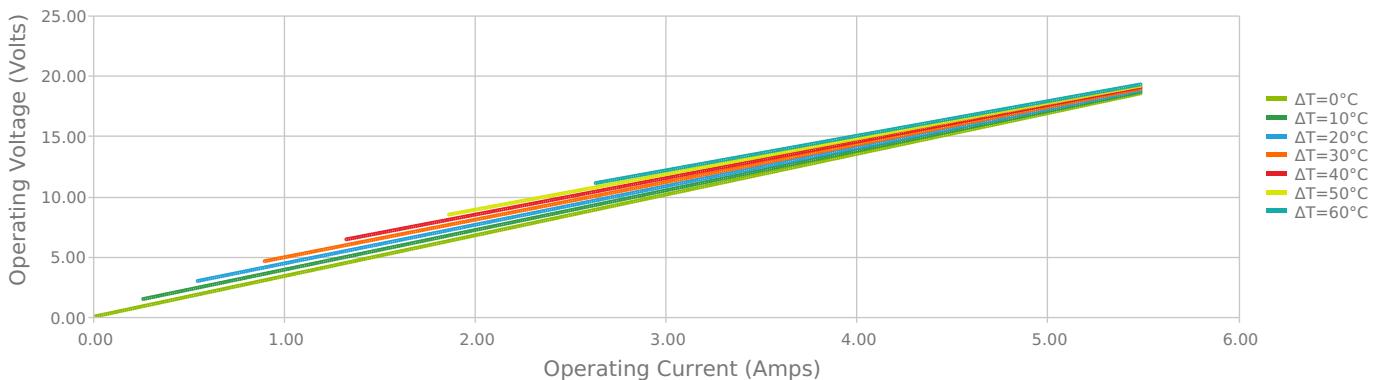
Heat Pumped at Cold Side
Thot = 27 °C

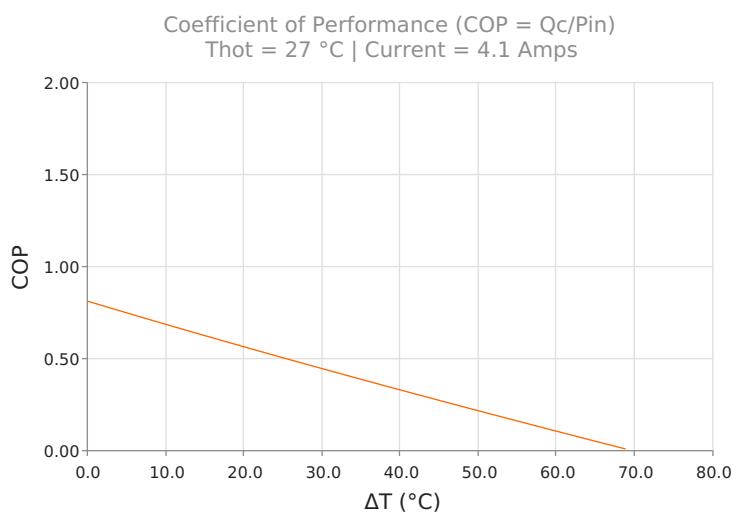
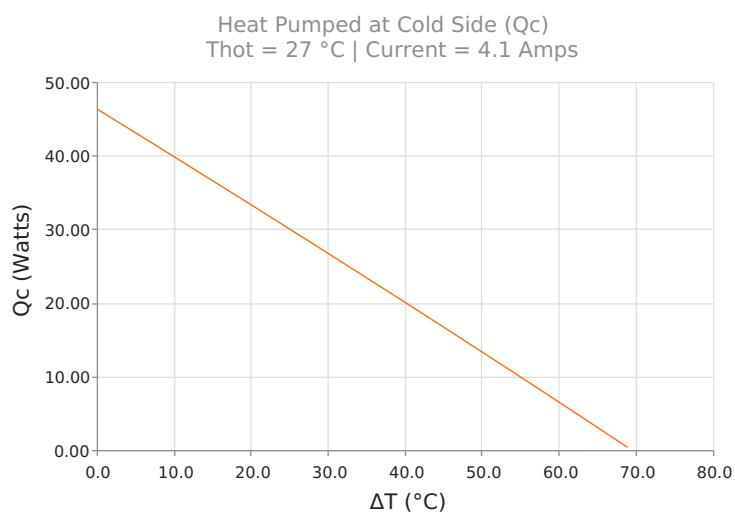
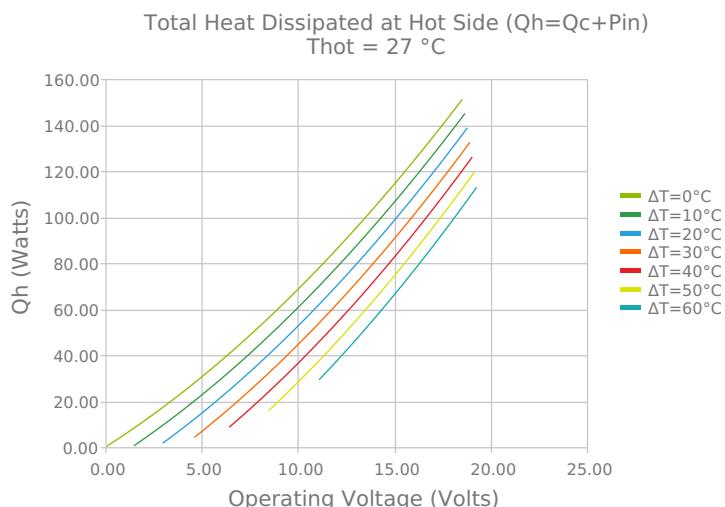
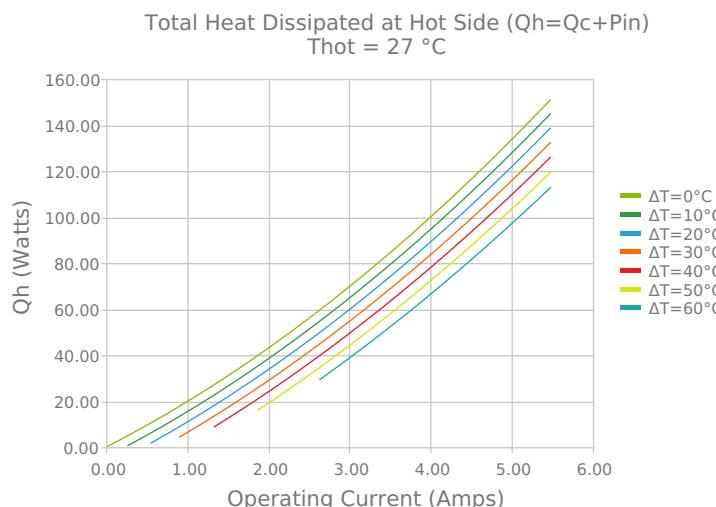
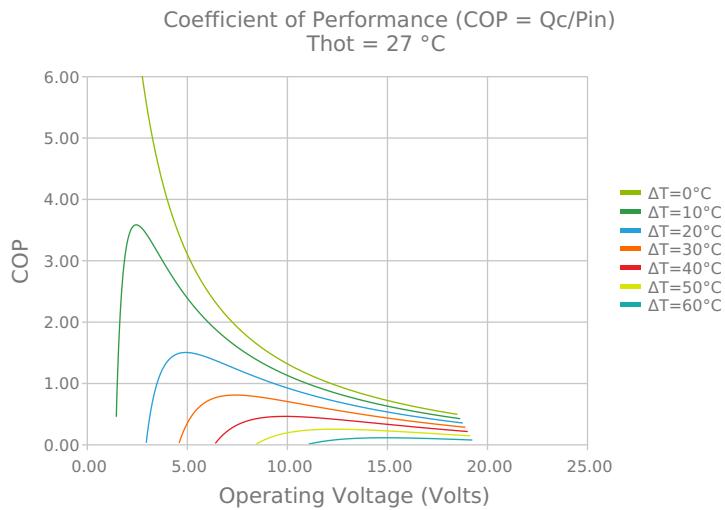
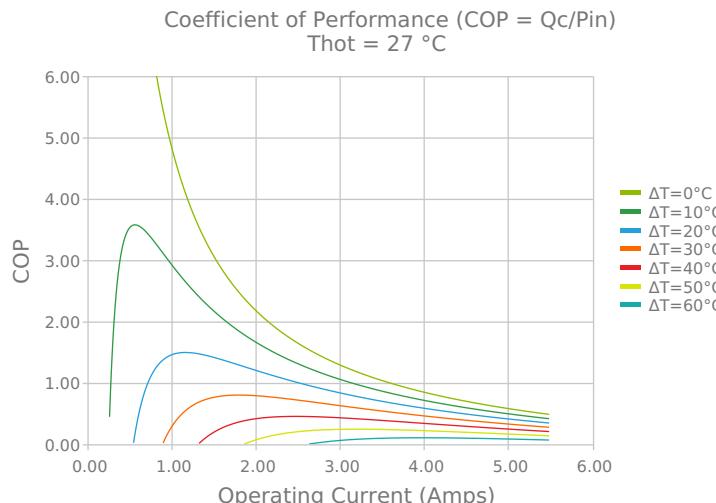


Heat Pumped at Cold Side
Thot = 27 °C



Current vs Voltage (I vs V)
Thot = 27 °C





SPECIFICATIONS*

	27.0 °C	50.0 °C	80.0 °C
Qcmax (ΔT = 0)	49.4 Watts	53.6 Watts	58.1 Watts
ΔTmax (Qc = 0)	70.5°C	78.8°C	88.8°C
I_{max} (I @ ΔT_{max})	4.8 Amps	4.8 Amps	4.7 Amps
V_{max} (V @ ΔT_{max})	17.6 Volts	19.5 Volts	22.0 Volts
Module Resistance	3.38 Ohms	3.78 Ohms	4.31 Ohms
Max Operating Temperature	120 °C		
Weight	20.0 gram(s)		

* Specifications reflect thermoelectric coefficients updated March 2020

FINISHING OPTIONS

Suffix	Thickness	Flatness / Parallelism	Hot Face	Cold Face	Lead Length
TA	3.700 ± 0.025 mm 0.146 ± 0.0010 in	0.025 mm / 0.025 mm 0.001 in / 0.001 in	Lapped	Lapped	152.4 mm 6.00 in

SEALING OPTIONS

Suffix	Sealant	Color	Temp Range	Description
	None			No sealing specified

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 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