PowerCycling PC Series PC7-16-F1-4040-TA-W6
MFG Part Number: 108161070003
Legacy Product

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: 387005685

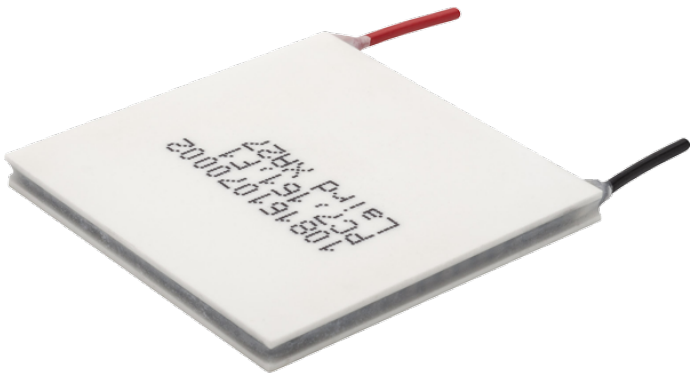
Description: PCX7-16-F1-4040-TA-W6

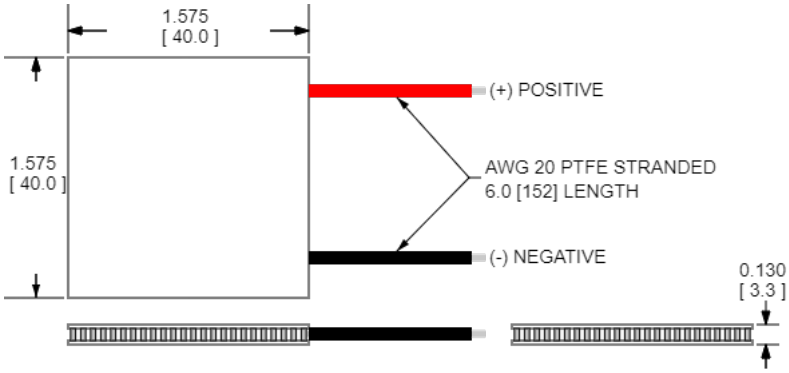
Features

- 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)

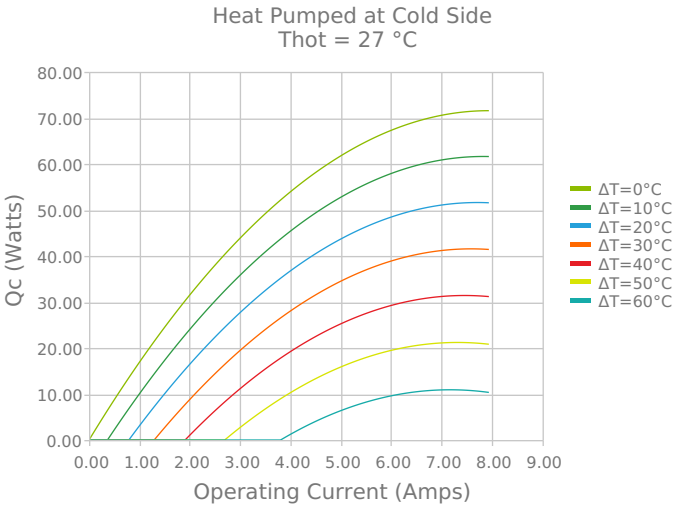


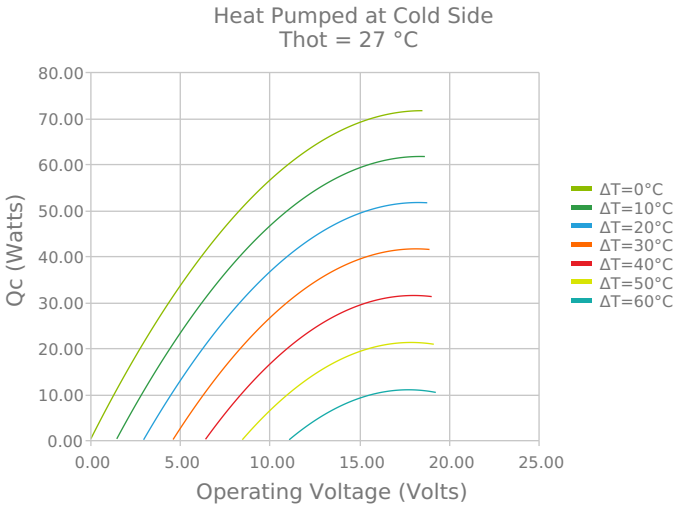


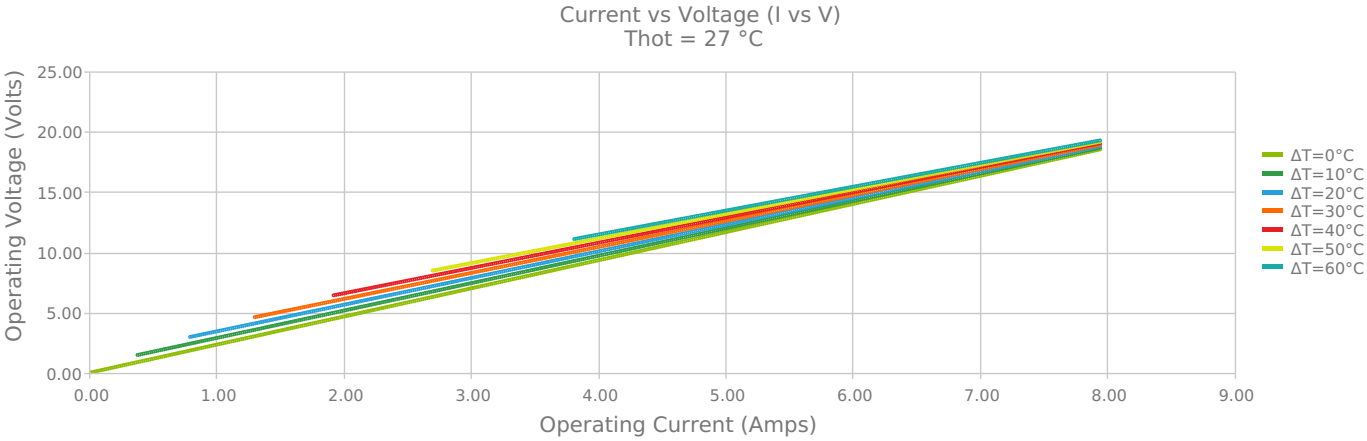
CERAMIC MATERIAL: Al_2O_3
SOLDER CONSTRUCTION: 232°C, SbSn

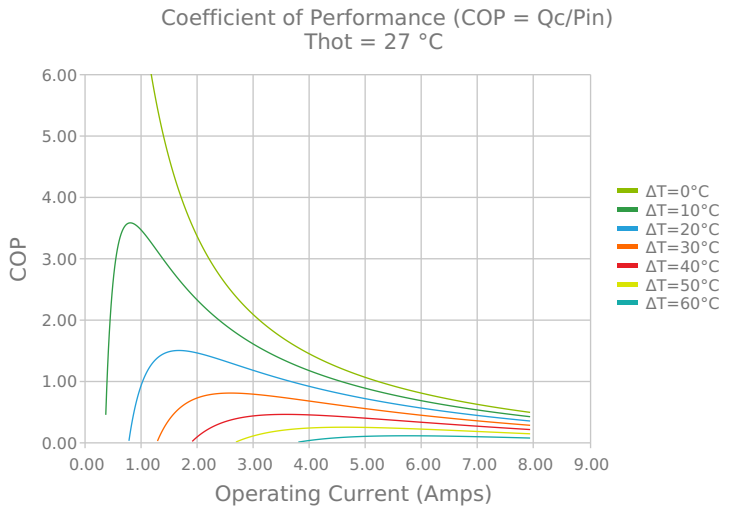
INCHES [MM]

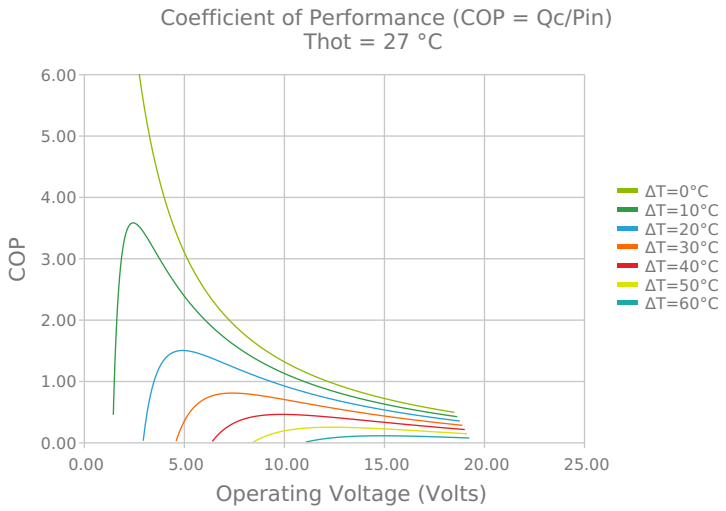
ELECTRICAL AND THERMAL PERFORMANCE

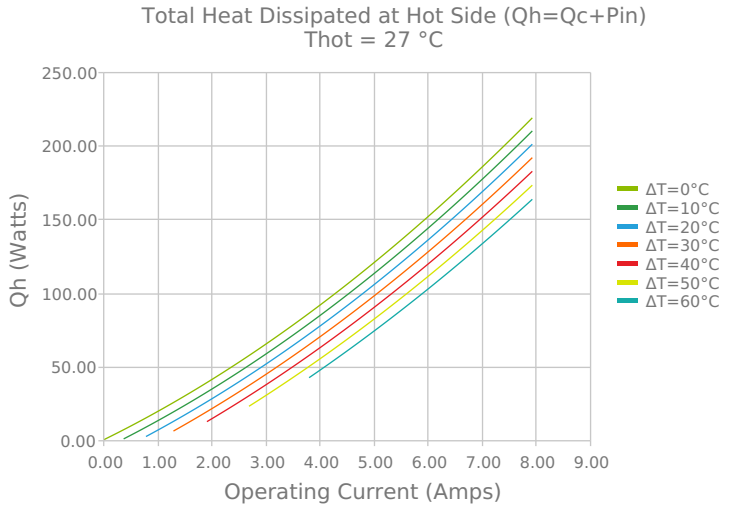


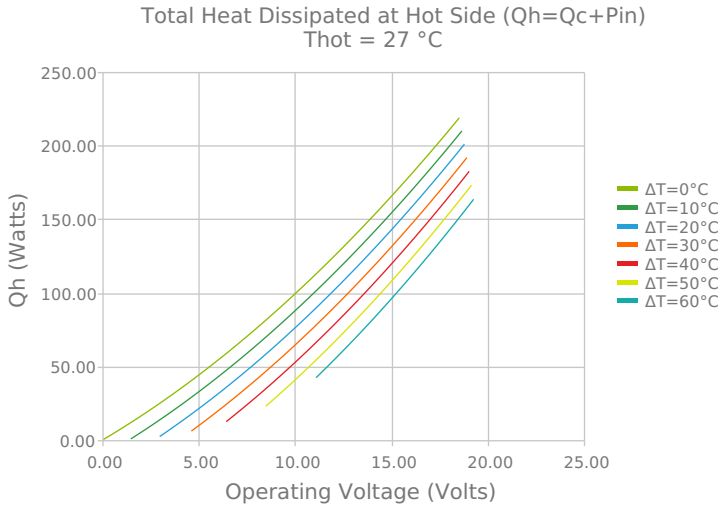


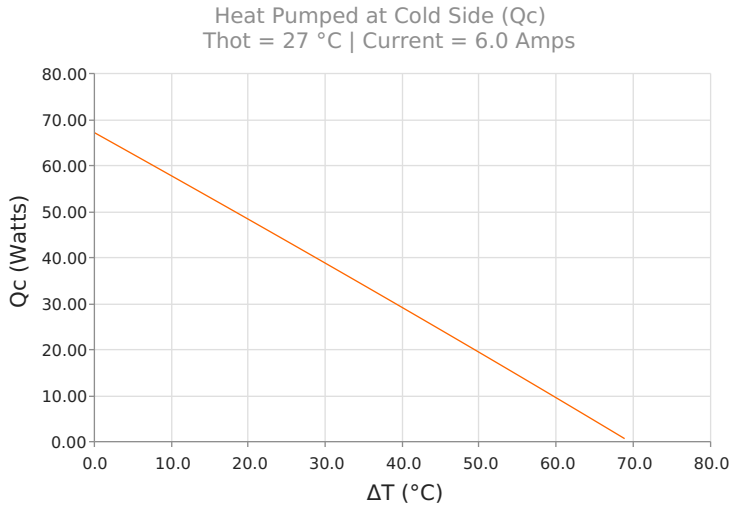


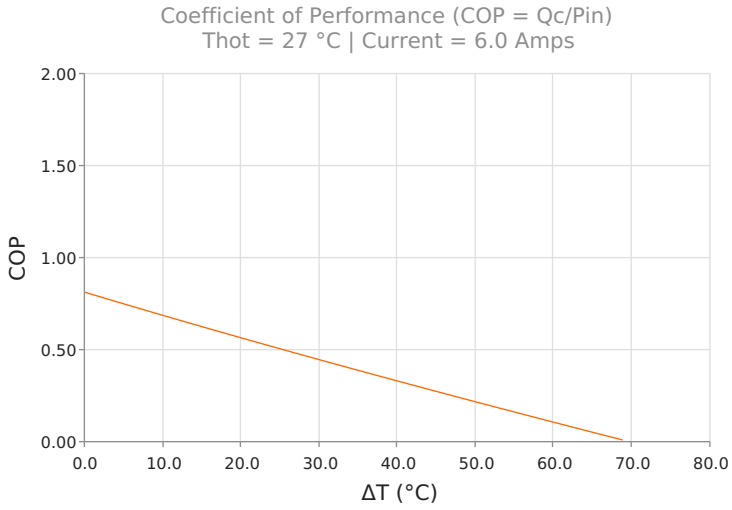

Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C
COP
Operating Current (Amps)
ΔT=0°C
ΔT=10°C
ΔT=20°C
ΔT=30°C
ΔT=40°C
ΔT=50°C
ΔT=60°C


Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C
COP
Operating Voltage (Volts)
ΔT=0°C
ΔT=10°C
ΔT=20°C
ΔT=30°C
ΔT=40°C
ΔT=50°C
ΔT=60°C


Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C
Qh (Watts)
Operating Current (Amps)
ΔT=0°C
ΔT=10°C
ΔT=20°C
ΔT=30°C
ΔT=40°C
ΔT=50°C
ΔT=60°C


Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C
Qh (Watts)
Operating Voltage (Volts)
ΔT=0°C
ΔT=10°C
ΔT=20°C
ΔT=30°C
ΔT=40°C
ΔT=50°C
ΔT=60°C


Heat Pumped at Cold Side (Qc)
Thot = 27 °C | Current = 6.0 Amps
Qc (Watts)
ΔT (°C)


Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C | Current = 6.0 Amps
COP
ΔT (°C)

SPECIFICATIONS*

Hot Side Temperature	27.0 °C	50.0 °C	80.0 °C
Qcmax (ΔT = 0)	71.6 Watts	77.6 Watts	84.1 Watts
ΔTmax (Qc = 0)	70.5°C	78.8°C	88.8°C
Imax (I @ ΔTmax)	7.0 Amps	6.9 Amps	6.8 Amps
Vmax (V @ ΔTmax)	17.6 Volts	19.5 Volts	22.0 Volts
Module Resistance	2.33 Ohms	2.61 Ohms	2.97 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	3.300 ±0.025 mm 0.130 ± 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 Imax or Vmax when operating module
3. Reference assembly guidelines for recommended installation
4. Solder tinning also available on metallized ceramics

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