# PowerCycling PC Series PC5-16-F1-4040-TA-RT-W6
# MFG Part Number: 108161050002
# Legacy Product

## PowerCycling PC Series Thermoelectric Cooler

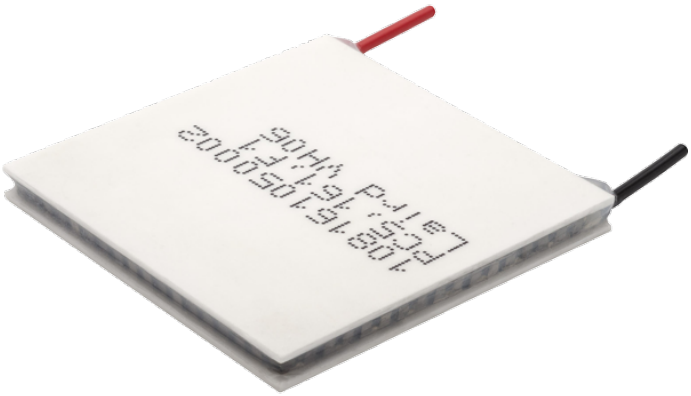
***Note:* *This product is not recommended for new designs.***

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

*The recommended replacement is:*

*MFG Part Number: 387005675*

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

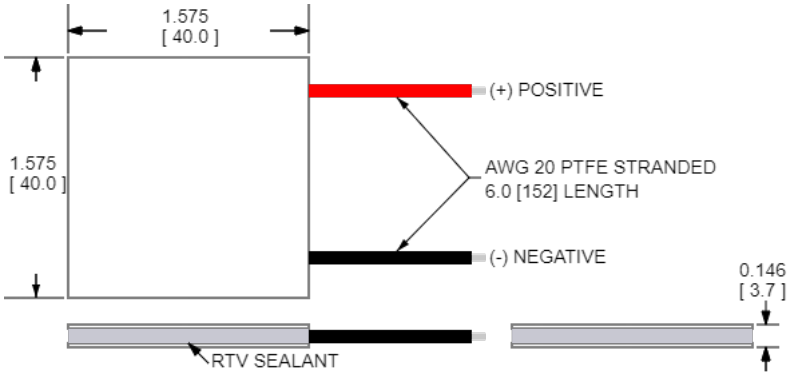


## Features

- 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)



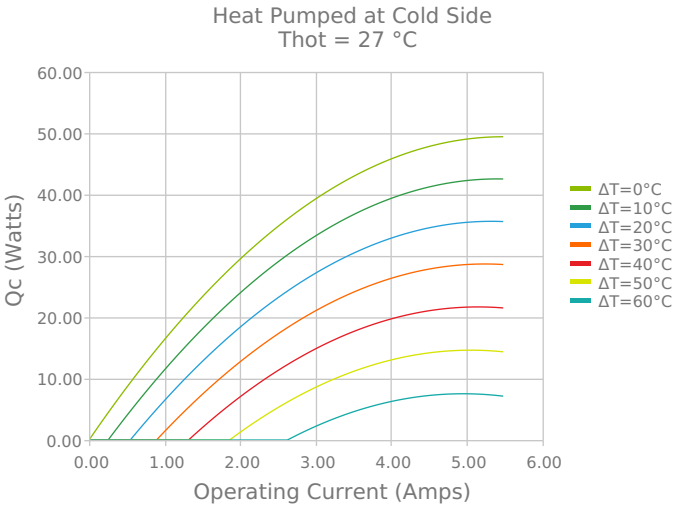

CERAMIC MATERIAL: $Al_2O_3$

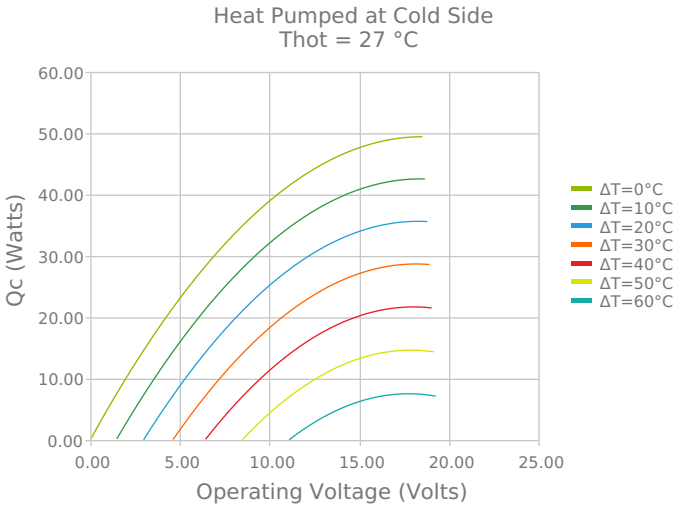
SOLDER CONSTRUCTION: 232°C, SbSn

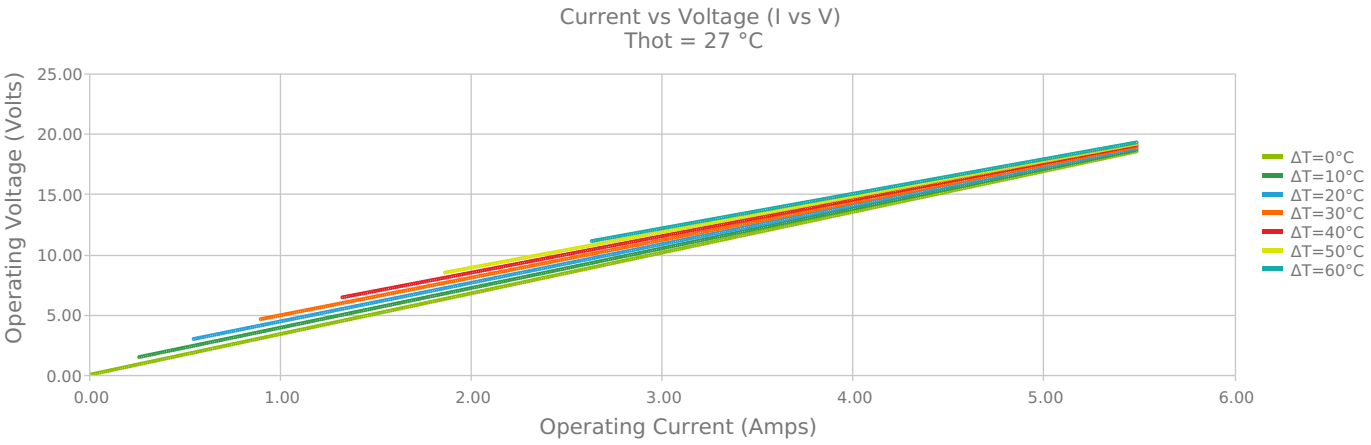
INCHES [ MM ]

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

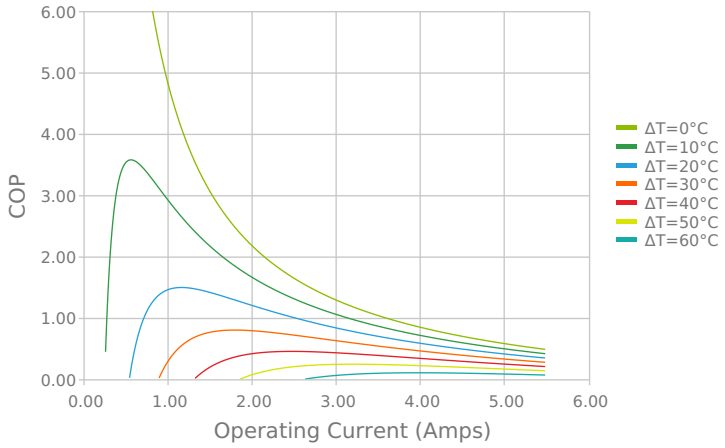
## ELECTRICAL AND THERMAL PERFORMANCE



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

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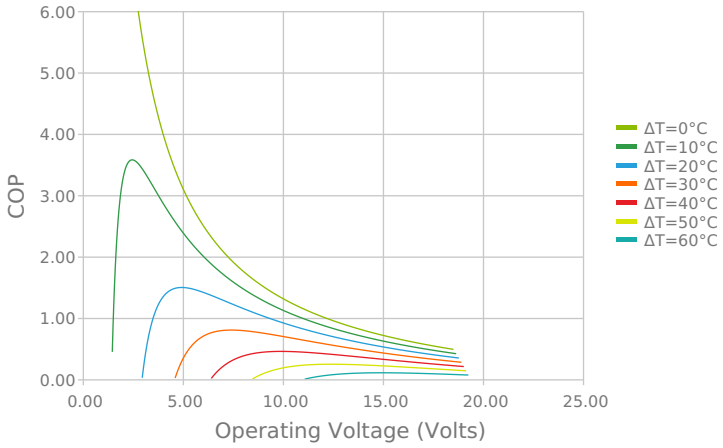
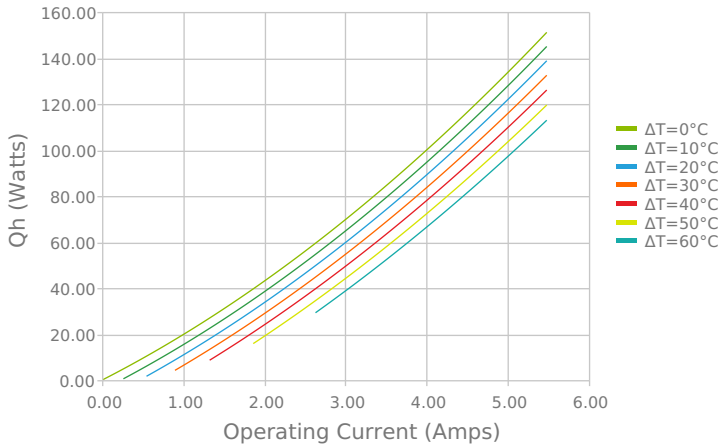



Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C




Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
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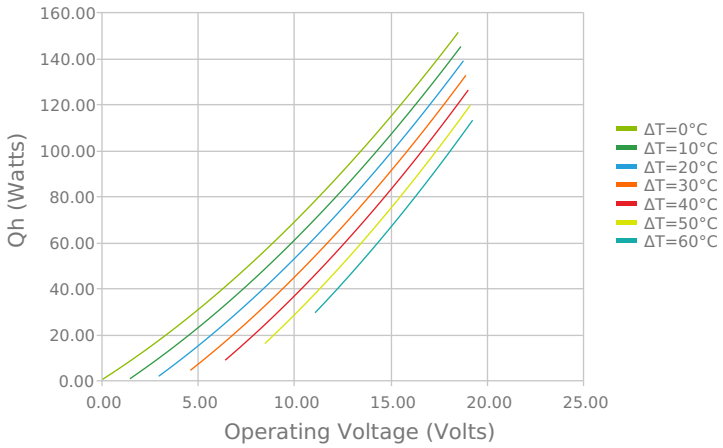
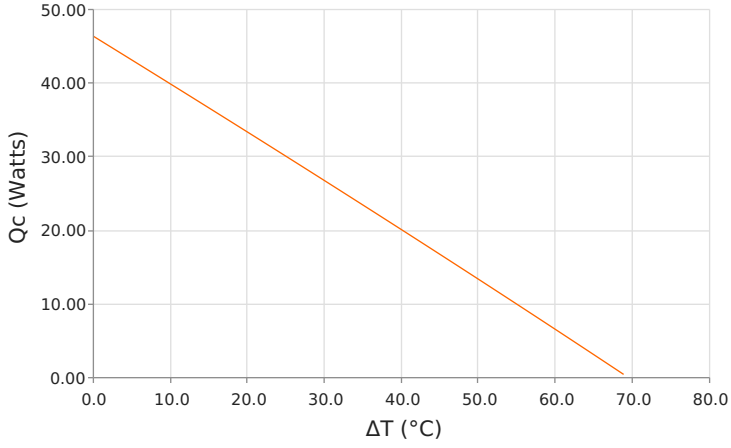
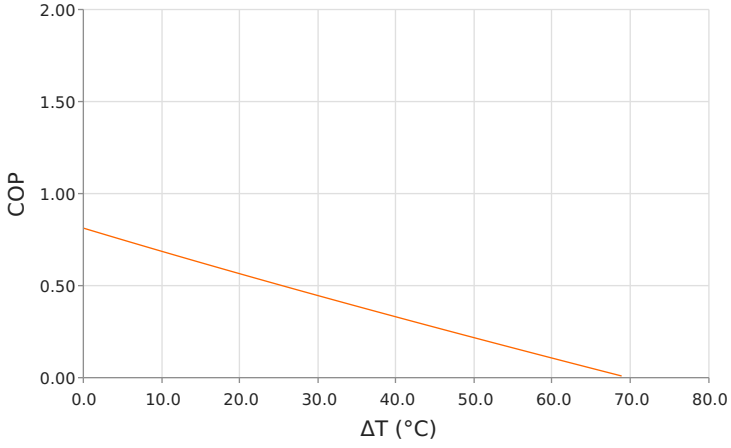



Heat Pumped at Cold Side (Qc)
Thot = 27 °C | Current = 4.1 Amps




Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C | Current = 4.1 Amps



# PowerCycling PC Series PC5-16-F1-4040-TA-RT-W6

**MFG Part Number: 108161050002**

**Legacy Product**

## SPECIFICATIONS*

| Hot Side Temperature | 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 |
| Imax (I @ ΔTmax) | 4.8 Amps | 4.8 Amps | 4.7 Amps |
| Vmax (V @ ΔTmax) | 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<br>0.146 ± 0.0010 in | 0.025 mm / 0.025 mm<br>0.001 in / 0.001 in | Lapped | Lapped | 152.4 mm<br>6.00 in |

## SEALING OPTIONS

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

## 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



Date: 01/08/2022