# UltraTEC™ UT Series UT15-200-F2-4040-TA-RT-W6
# MFG Part Number: 430856-501

**Legacy Product**

## UltraTEC™ UT Series Thermoelectric Cooler

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

*The recommended replacement is:*

*MFG Part Number: 387004713*

*Description: UTX15-200-F2-4040-TA-RT-W6*

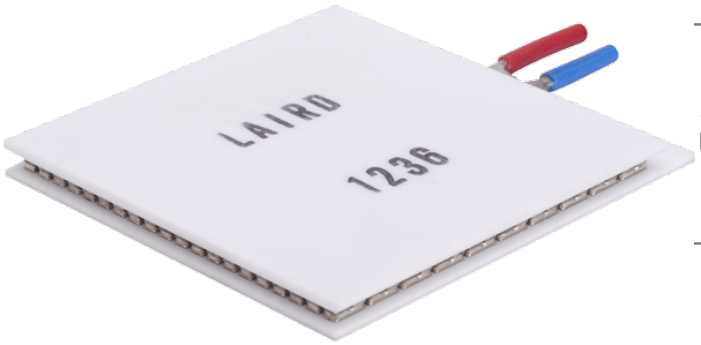
The UT15-200-F2-4040-TA-RT-W6 is a high heat flux density thermoelectric cooler. The thermoelectric module is assembled with a large number of semiconducting thermoelectric couples to achieve a higher heat pumping capacity than standard single stage thermoelectric coolers. It has a maximum Qc of 193.4 Watts when ΔT = 0 and a maximum ΔT of 68.9 °C at Qc = 0.

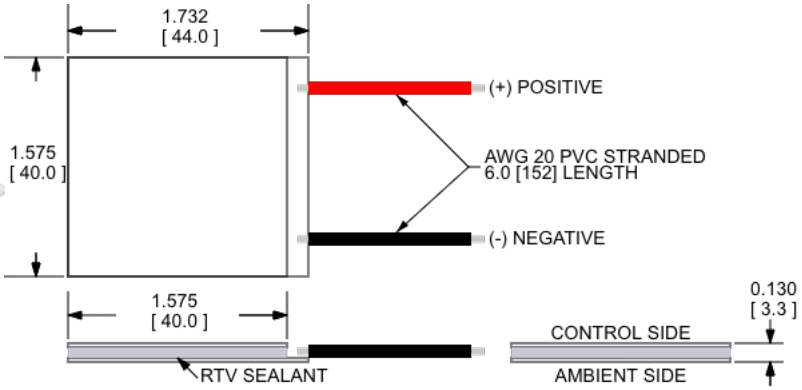
### Features

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

### Applications

- Thermoelectric Coolers and Assemblies for Medical Applications
- Thermoelectric Coolers for Handheld Cosmetic Lasers
- Industrial Laser Cooling
- Peltier Cooling for Digital Light Processors

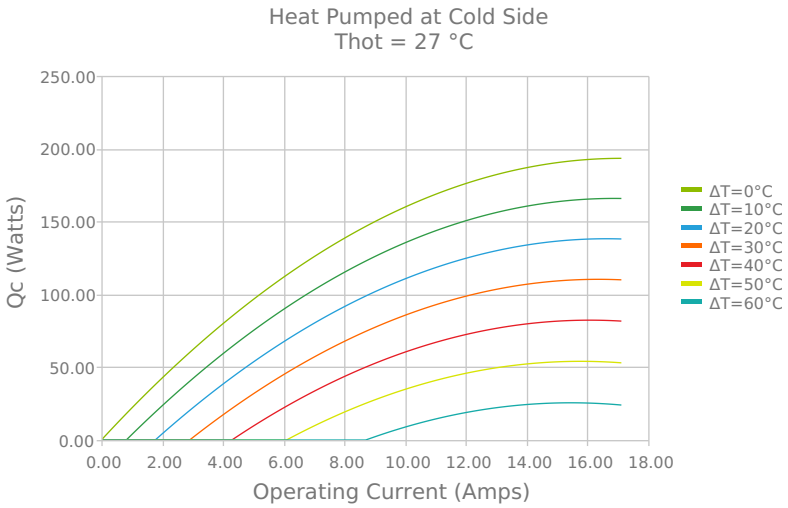


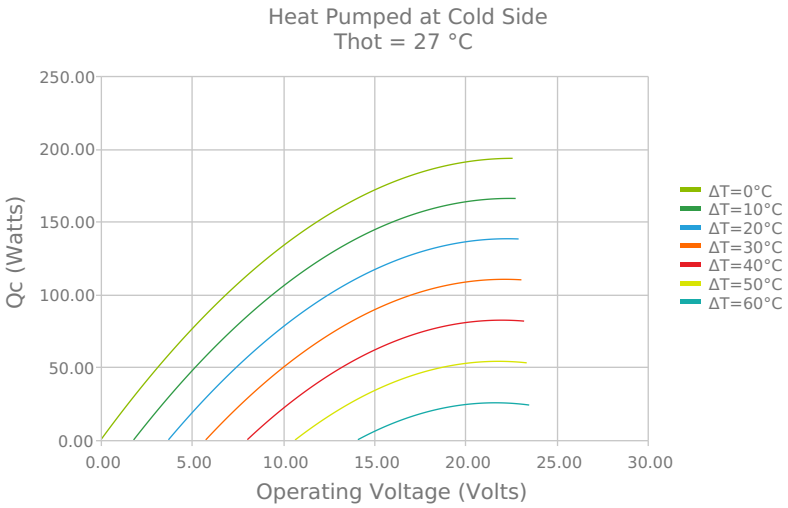



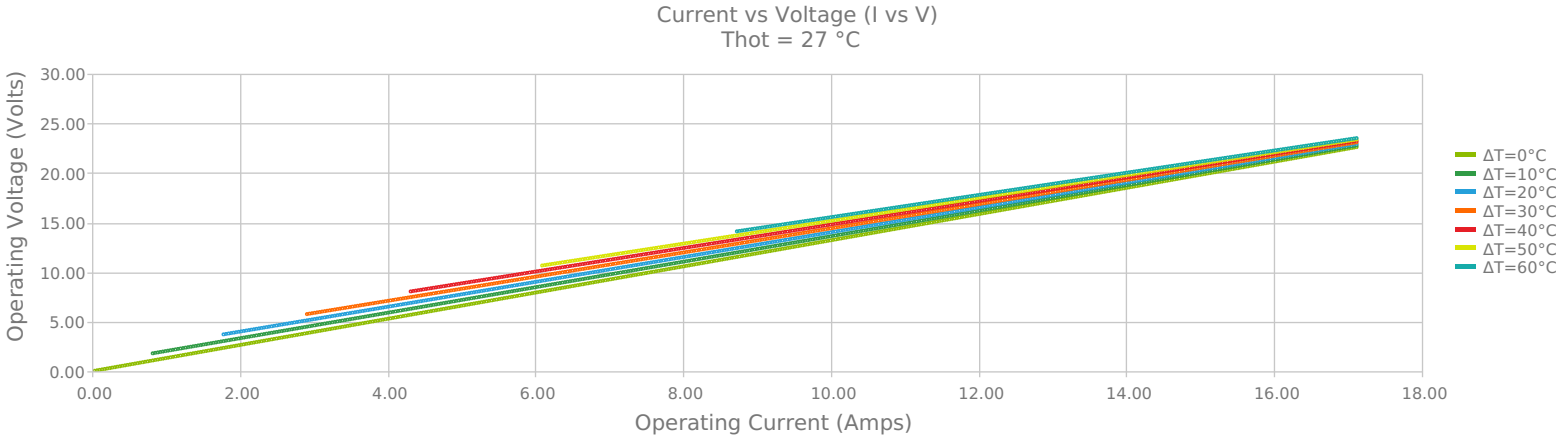

CERAMIC MATERIAL: $Al_2O_3$
SOLDER CONSTRUCTION: 138°C, BiSn
INCHES [ MM ]
Note: Allow 0.020 in [0.5 mm] around perimeter of the thermoelectric cooler and lead wire attachment to accommodate sealant

## Electrical and Thermal Performance

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.



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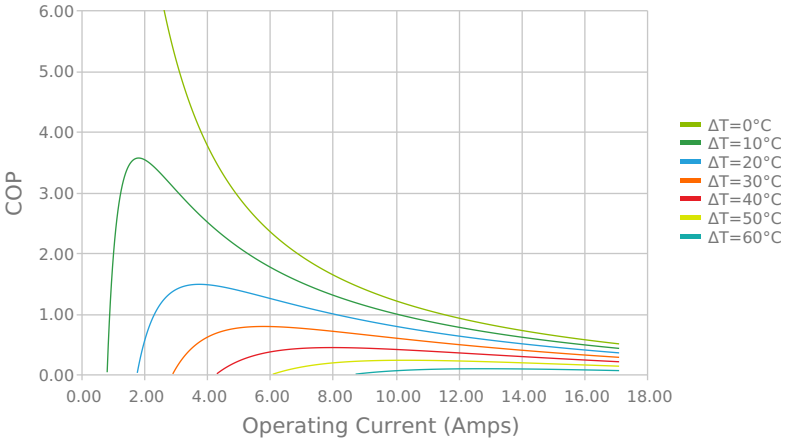
Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C

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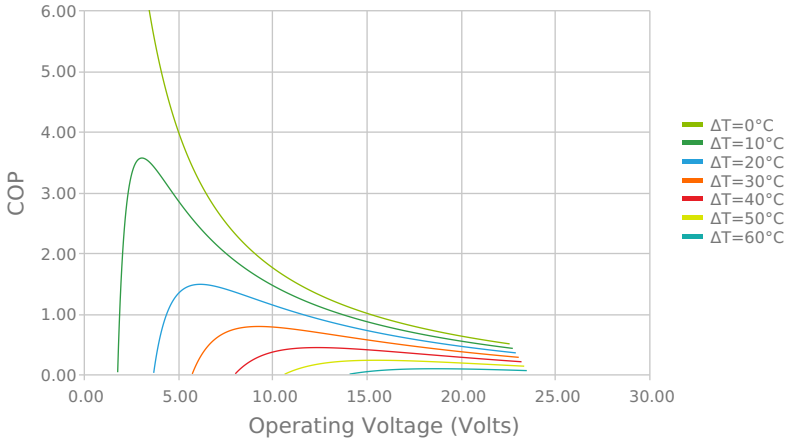
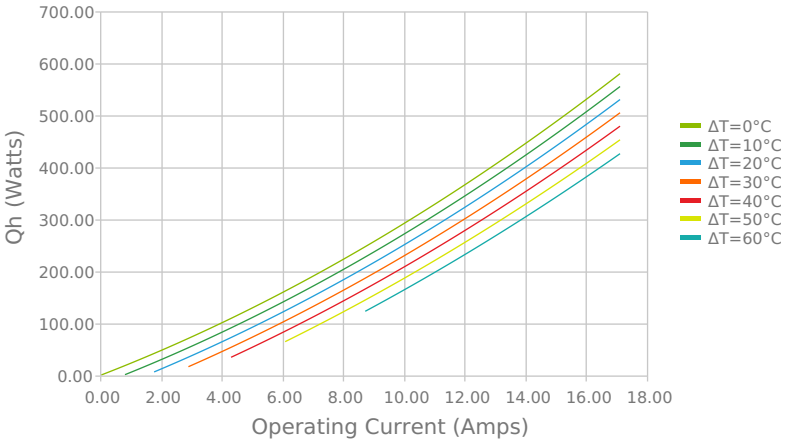



Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C

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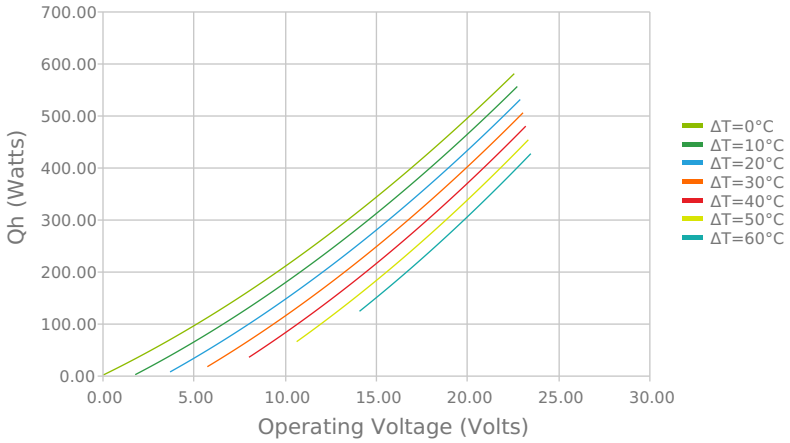
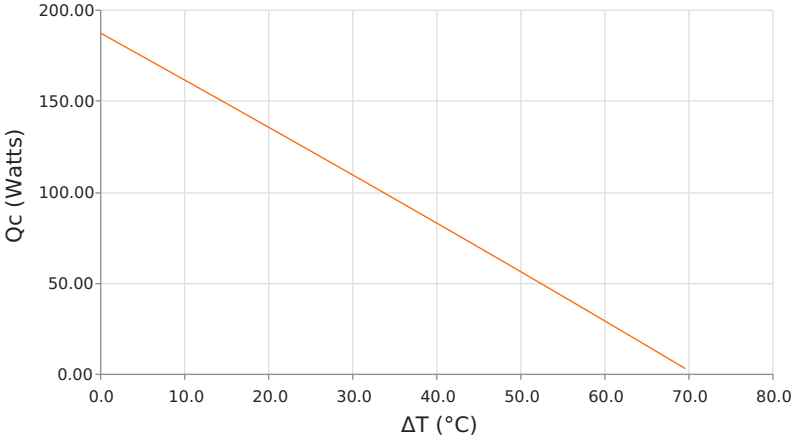



Heat Pumped at Cold Side (Qc)
Thot = 35 °C | Ioperating = 12.9 Amps

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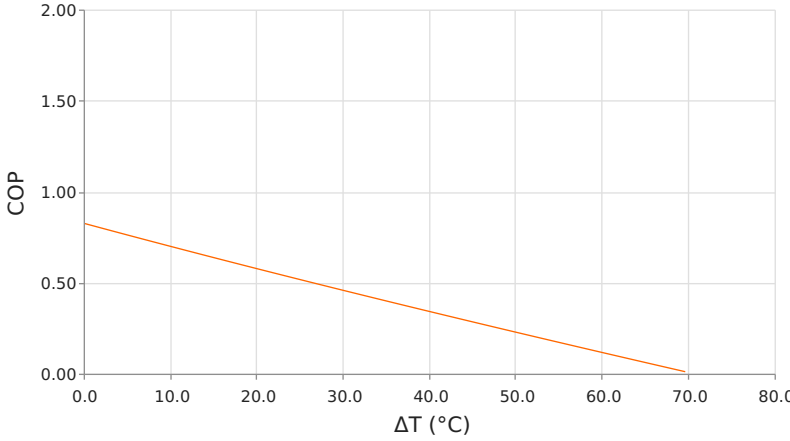

# UltraTEC™ UT Series UT15-200-F2-4040-TA-RT-W6
## MFG Part Number: 430856-501

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## Specifications

| Hot Side Temperature | 27.0 °C | 35.0 °C | 50.0 °C |
|---|---|---|---|
| Qcmax (ΔT = 0) | 193.4 Watts | 199.3 Watts | 209.7 Watts |
| ΔTmax (Qc = 0) | 68.9°C | 71.8°C | 77.0°C |
| Imax (I @ ΔTmax) | 15.2 Amps | 15.1 Amps | 14.9 Amps |
| Vmax (V @ ΔTmax) | 21.5 Volts | 22.3 Volts | 23.8 Volts |
| Module Resistance | 1.32 Ohms | 1.38 Ohms | 1.48 Ohms |
| Max Operating Temperature | 80 °C | | |
| Weight | 36.0 gram(s) | | |

## Finishing Options

| Suffix | Thickness | Flatness / Parallelism | Hot Face | Cold Face | Lead Length |
|---|---|---|---|---|---|
| TA | 3.300 ±0.025 mm<br>0.130 ± 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

Max operating temperature: 80°C
Do not exceed Imax or Vmax when operating module
Reference assembly guidelines for recommended installation



Revision: 00 Date: 06-01-2022

Print Date: 05-29-2025