

The UltraTECTM UTX Series is a high-performance thermoelectric cooler for demanding applications. The module is assembled with next generation thermoelectric material that has higher cooling capacity, temperature differential and efficiency than standard semiconductor materials. The UltraTECTM UTX Series uses a large number of N and P couples to generate a higher heat flux density than standard thermoelectric coolers.

This product often uses a liquid heat exchanger on the hot side to dissipate heat generated by a cooler. The series is available in multiple configurations and is ideal for spot cooling applications that require higher cooling capacities with limited surface area.

FEATURES

- High heat pump density
- Precise temperature control
- Reliable Solid-State Operation
- No sound or vibration
- DC Operation
- RoHS Compliant

APPLICATIONS

- Industrial Lasers
- Analytical Instrumentation
- Medical Diagnostics
- Laser Projectors

*Specifications reflect thermoelectric coefficients updated December 2019

TECHNICAL SPECIFICATIONS*	
Hot Side Temperature (°C)	27
Qmax (W)	116
Delta Tmax (°C)	72
I _{max} (Amps)	8.6
V _{max} (Volts)	22.9
Module Resistance (Ohms)	2.35

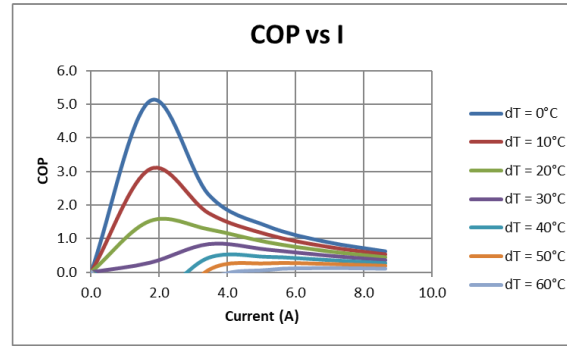
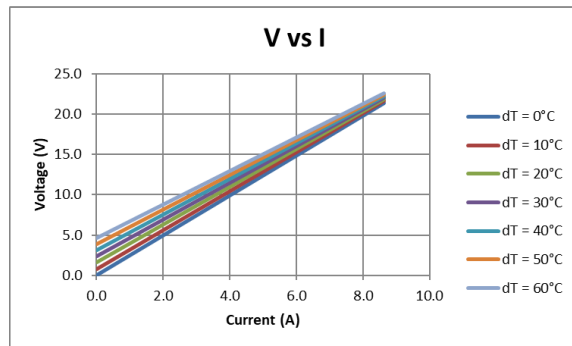
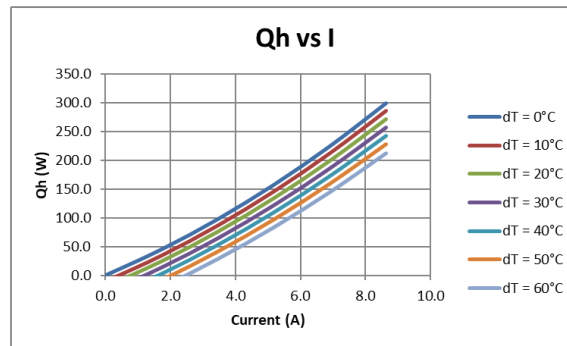
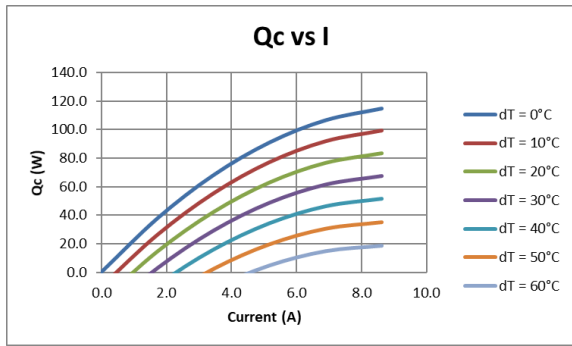
LAPPING OPTIONS

SUFFIX	THICKNESS (PRIOR TO THINNING)	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	LEAD LENGTH
TA	0.150" ± 0.001"	0.001" / 0.001"	Lapped	Lapped	6"
TB	0.150" ± 0.0005"	0.0005" / 0.0005"	Lapped	Lapped	6"

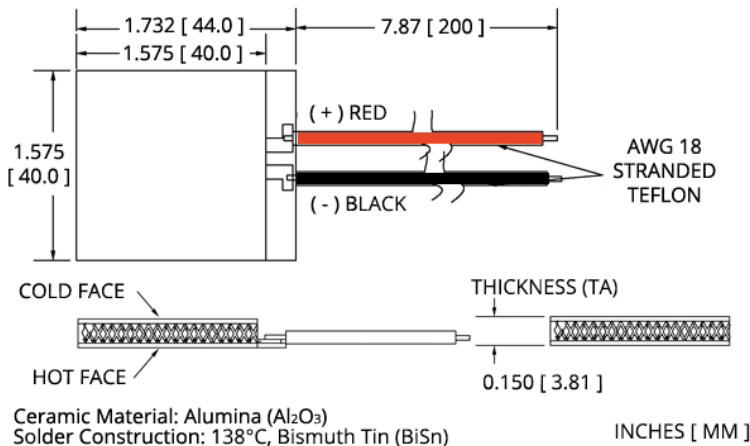
SEALING OPTIONS

SUFFIX	SEALANT	COLOR	TEMPERATURE RANGE	DESCRIPTION
RT	RTV	White	-60 to +204 °C	Non-corrosive, silicone adhesive sealant
EP	Epoxy	Black	-55 to +130 °C	Low density syntactic foam epoxy encapsulant

PERFORMANCE CURVES AT $T_h = 27^\circ\text{C}$



MECHANICAL DRAWINGS



Ceramic material 96%
Alumina ceramics
Solder construction: 138°C BiSn

Operating tips

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



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