



The UltraTEC™ 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 UltraTEC™ 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)	123
Delta Tmax (°C)	72
I _{max} (Amps)	14.6
V _{max} (Volts)	14.6
Module Resistance (Ohms)	0.89

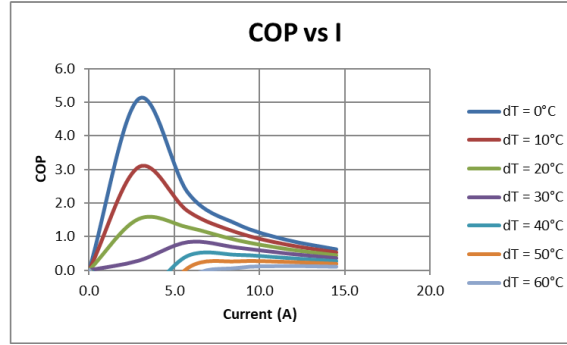
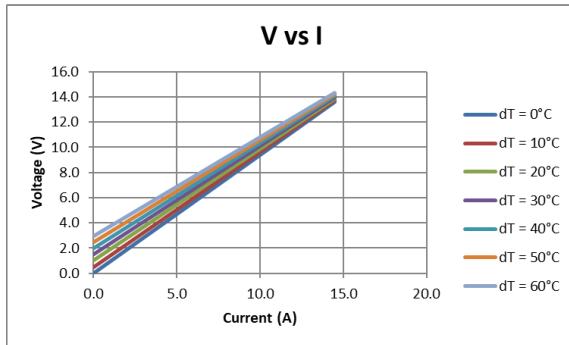
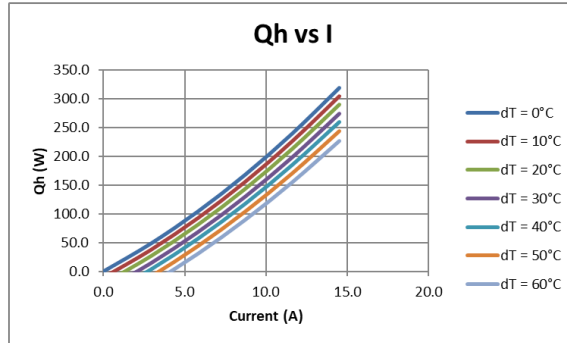
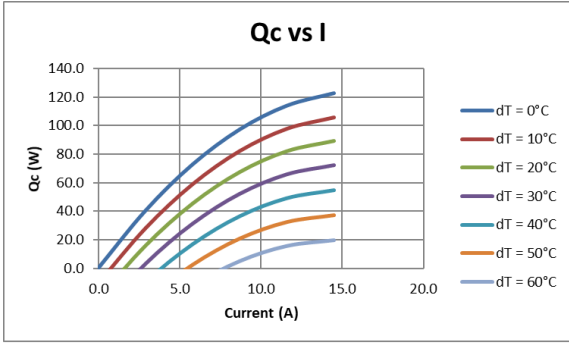
LAPPING OPTIONS

SUFFIX	THICKNESS (PRIOR TO THINNING)	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	LEAD LENGTH
TA	0.112" +/- 0.001"	0.001" / 0.001"	Lapped	Lapped	6.0"
TB	0.112" +/- 0.0005"	0.0005" / 0.0005"	Lapped	Lapped	6.0"

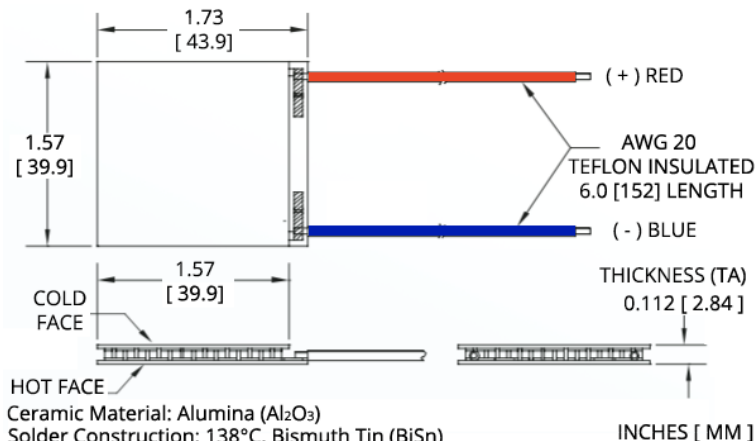
SEALING OPTIONS

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

LTS-UTX15-12-F2-4040-DATASHEET-1119

www.lairdthermal.com



Laird warrants to the original end user customer of its products that its products are free from defects in material and workmanship. Subject to conditions and limitations Laird will, at its option, either repair or replace any part of its products that prove defective because of improper workmanship or materials. This limited warranty is in force for the useful lifetime of the original end product into which the Laird product is installed. Useful lifetime of the original end product may vary but is not to exceed five (5) years from the original date of the end product purchase.

Any information furnished by Laird Inc. and its agents is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird materials rests with the end user, since Laird and its agents cannot be aware of all potential uses. Laird makes no warranties as to the fitness, merchantability or suitability of any Laird materials or products for any specific or general uses. Laird shall not be liable for incidental or consequential damages of any kind. All Laird products are sold pursuant to the Laird Terms and Conditions of sale in effect from time to time, a copy of which will be furnished upon request.

© Copyright 2020 Laird Inc. All Rights Reserved. Laird, Laird Technologies, the Laird Logo, and other marks are trademarks or registered trademarks of Laird Inc. or an affiliate company thereof. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird or any third party intellectual property rights.