

# UltraTEC<sup>™</sup> UTX Series UTX8-12-F2-3030 Thermoelectric Coolers



The UltraTEC<sup>™</sup> 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<sup>™</sup> 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*	NICAL SPECIFICATIONS*				
Hot Side Temperature (°C)	27				
Qmax (W)	67				
Delta Tmax (°C)	72				
Imax (Amps)	7.8				
Vmax (Volts)	14.6				
Module Resistance (Ohms)	1.64				

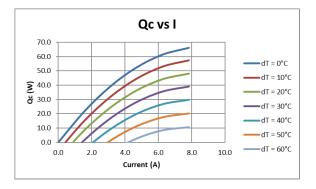
# LAPPING OPTIONS

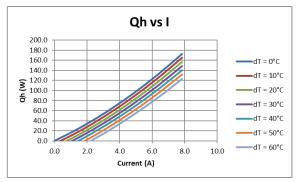
SUFFIX	THICKNESS (PRIOR TO THINNING)	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	LEAD LENGTH
TA	0.101" +/- 0.001"	0.001" / 0.001"	Lapped	Lapped	6.0"
TB	0.101" +/- 0.0005"	0.0005" / 0.0005"	Lapped	Lapped	6.0"

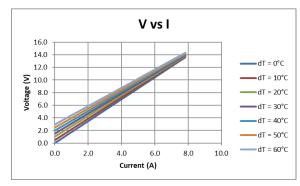
# SEALING OPTIONS

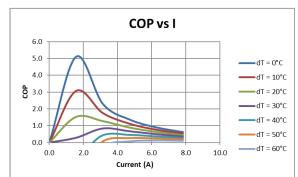
SUFFIX	SEALANT	COLOR	TEMPERATURE RANGE	DESCRIPTION
RT	RTV	White	-60 to +204 °C	Non-corrosive, silicone adhesive sealant
EP	Ероху	Black	-55 to +130 °C	Low density syntactic foam epoxy encapsulant

# PERFORMANCE CURVES AT Th = 27° C

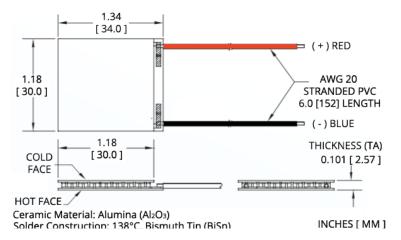








### MECHANICAL DRAWINGS



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

#### **Operating tips**

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

www.lairdthermal.com

#### LTS-UTX8-12-F2-3030-DATASHEET



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