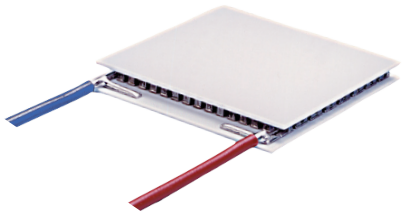
UltraTEC™ Series UT15,12,F2,4040
Thermoelectric Module



The UltraTEC™ Series is a high heat pumping density thermoelectric module (TEM). The module is assembled with a large number of semiconductor couples to achieve a higher heat pumping capacity than standard single stage TEMs.

This product line is available in multiple configurations and is ideal for applications that require higher cooling capacities with limited surface area. Assembled with Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide ceramics, the UltraTEC™ Series is designed for higher current and larger heat-pumping applications.

FEATURES RoHS

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

APPLICATIONS

- Analytical instrumentation
- Clinical diagnostics
- Photonics laser systems
- Electronic enclosure cooling
- Food and beverage cooling
- Chillers (liquid cooling)

PERFORMANCE SPECIFICATIONS		
Hot side temperature (°C)	25	50
Qmax (watts)	126.2	138.6
Delta Tmax (°C)	67	75
Imax (amps)	14.7	14.7
Vmax (volts)	14.5	16.4
Module resistance (ohms)	0.91	1.03

SUFFIX	THICKNESS	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 OPTION

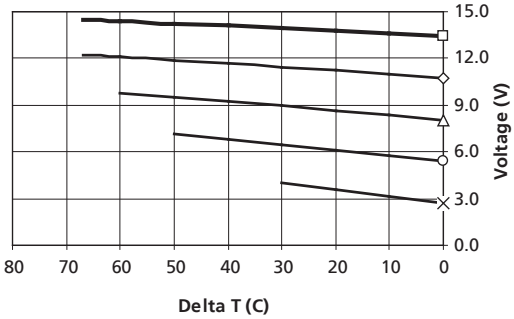
SUFFIX	SEALANT	COLOR	TEMP RANGE	DESCRIPTION
RT	RTV	White	-60 to 204 °C	Non-corrosive, silicone adhesive sealant
EP	Epoxy	Black	-55 to 150 °C	Low density syntactic foam epoxy encapsulant

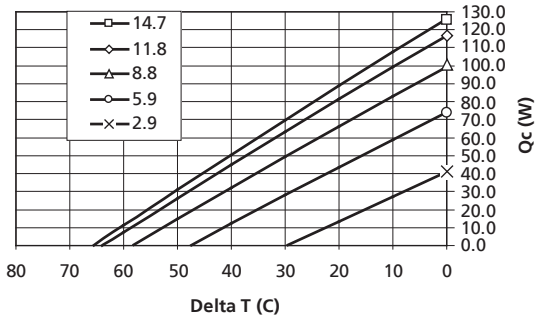
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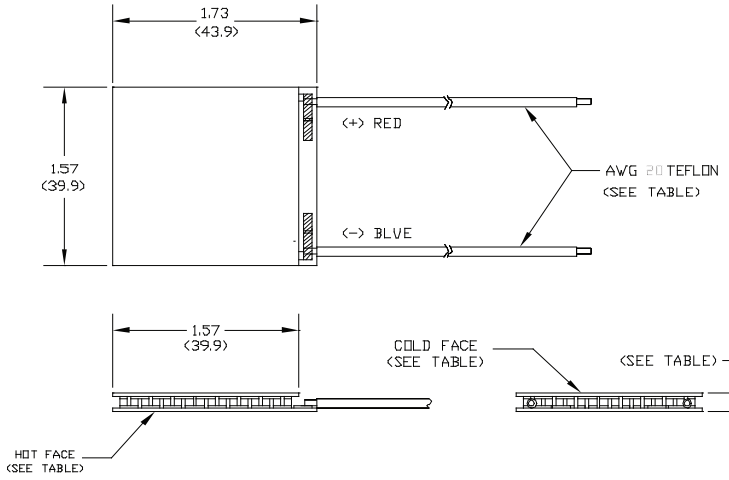
UltraTEC™ Series UT15,12,F2,4040
Thermoelectric Module

PERFORMANCE CURVES





MECHANICAL DRAWING



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

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