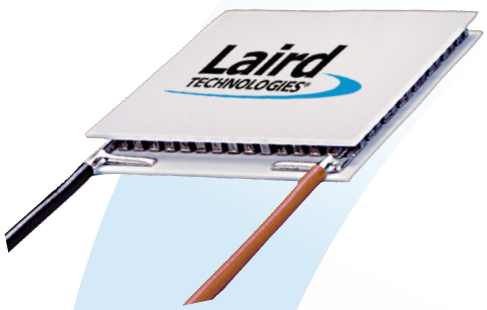
Laird TECHNOLOGIES

Innovative **Technology** for a **Connected** World

ThermaTEC™ Series HT4,12,F2,4040
Thermoelectric Modules



The ThermaTEC™ Series of thermoelectric modules (TEMs) are designed to operate under cycling conditions or high temperature applications.

This product line is available in multiple configurations and is ideal for applications that require both heating and cooling mode (reverse polarity) or power generation. Assembled with proprietary solder construction, Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide ceramics, the ThermaTEC™ Series is designed for higher current and larger heat-pumping applications.

FEATURES

- Thermal Cycling Durability
- Power Cycling Reliability
- Precise Temperature Control
- Strong Lead Attachment
- RoHS Compliant
- Continuous Operation at High Temperatures

APPLICATIONS

- Analytical Instrumentation
- PCR Cyclers
- Thermal Test Sockets
- Electronic Enclosure Cooling
- Chillers (Liquid Cooling)
- Power Generation

PERFORMANCE SPECIFICATIONS		
Hot Side Temperature (°C)	25°C	50°C
Qmax (Watts)	33.0	36.0
Delta Tmax (°C)	64	75
Imax (Amps)	3.8	3.8
Vmax (Volts)	14.5	16.4
Module Resistance (Ohms)	3.49	3.93

SUFFIX	THICKNESS (PRIOR TO TINNING)	FLATNESS & PARALLELISM	HOT FACE	COLD FACE	Lead Length
11	0.163″ ± 0.005″	0.002″ / 0.0035″	Lapped	Lapped	6.0
TA	0.163″ ± 0.001″	0.001″ / 0.001″	Lapped	Lapped	6.0″
TB	0.163″ ± 0.0005″	0.0005″ / 0.0005″	Lapped	Lapped	6.0″

SEALING OPTION

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

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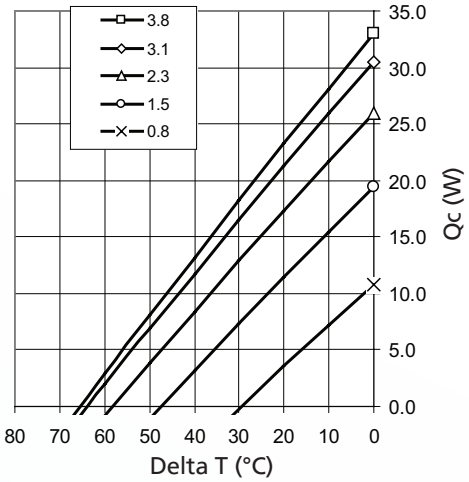
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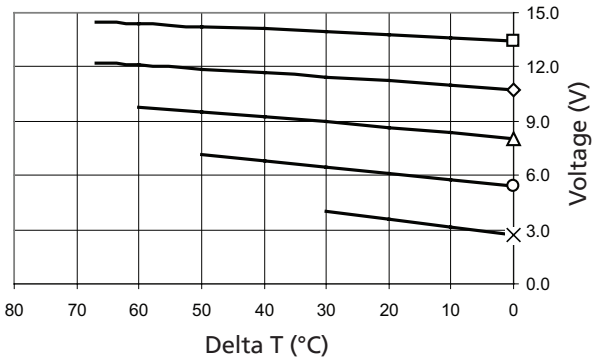
ThermaTEC™ Series HT4,12,F2,4040
Thermoelectric Modules

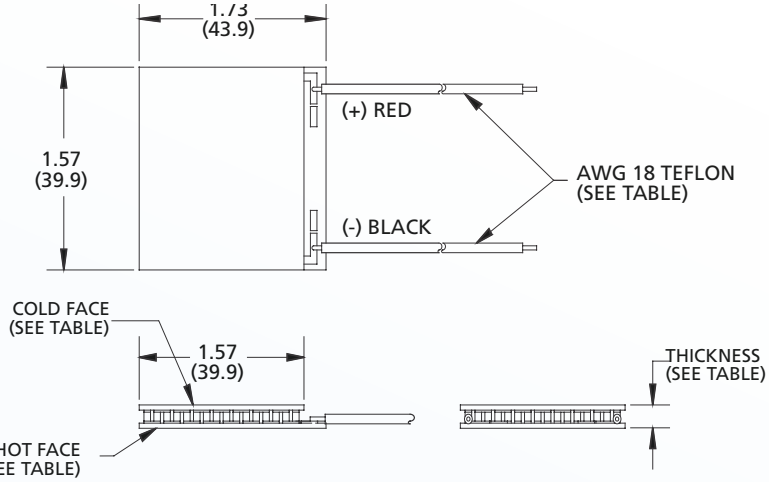
Performance Curves at Th = 25°C

THERMO



ELECTRIC





Ceramic Material: Alumina (Al_2O_3)
Solder Construction: 271°C, Proprietary

OPERATING TIPS

- Max Operating Temperature: 175°C
- Do not exceed Imax or Vmax when operating module
- Reference assembly guidelines for recommended installation

THR-DS-HT4,12,F2,4040 0509

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