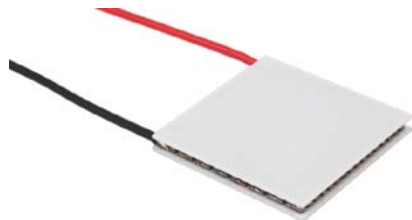


ZT Series ZT6-12-F1-4040

Thermoelectric Module



The ZT Series is a high performance thermoelectric module (TEM). The module is assembled with premium Bismuth Telluride semiconductor material that achieves a higher temperature differential than standard single stage TEMs.

This product line is available in multiple configurations and is ideal for applications that require reaching cold temperatures. Assembled with top grade Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide ceramics, the ZT Series is designed for higher current and larger heat-pumping applications.

Americas: +1.919.597.7300
Europe: +46.31.420530
Asia: +86.755.2714.1166
ets.sales@lairdtech.com
www.lairdtech.com

FEATURES

- High temperature differential
- 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

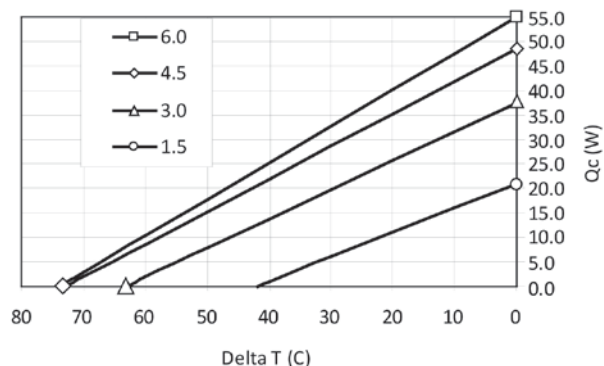
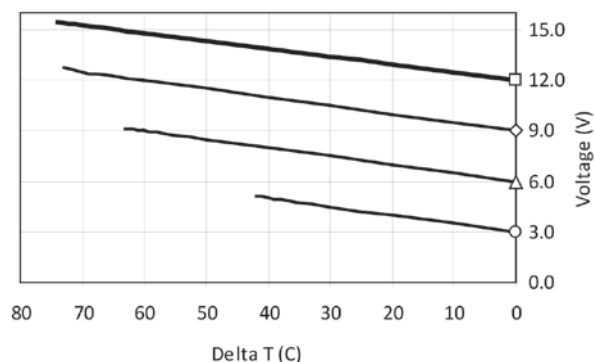
| | |
|---------------------------|------|
| Hot Side Temperature (°C) | 25 |
| Qmax (watts) | 55.0 |
| Delta Tmax (°C) | 74 |
| Imax (amps) | 6.0 |
| Vmax (volts) | 15.4 |
| Module Resistance (ohms) | 2.21 |

| SUFFIX | THICKNESS | FLATNESS & PARALLELISM | HOT FACE | COLD FACE | LEAD LENGTH |
|--------|------------------|------------------------|----------|-----------|-------------|
| TA | 0.154" ± 0.001" | 0.001" / 0.001" | Lapped | Lapped | 8.0" |
| TB | 0.154" ± 0.0005" | 0.0005" / 0.0005" | Lapped | Lapped | 8.0" |

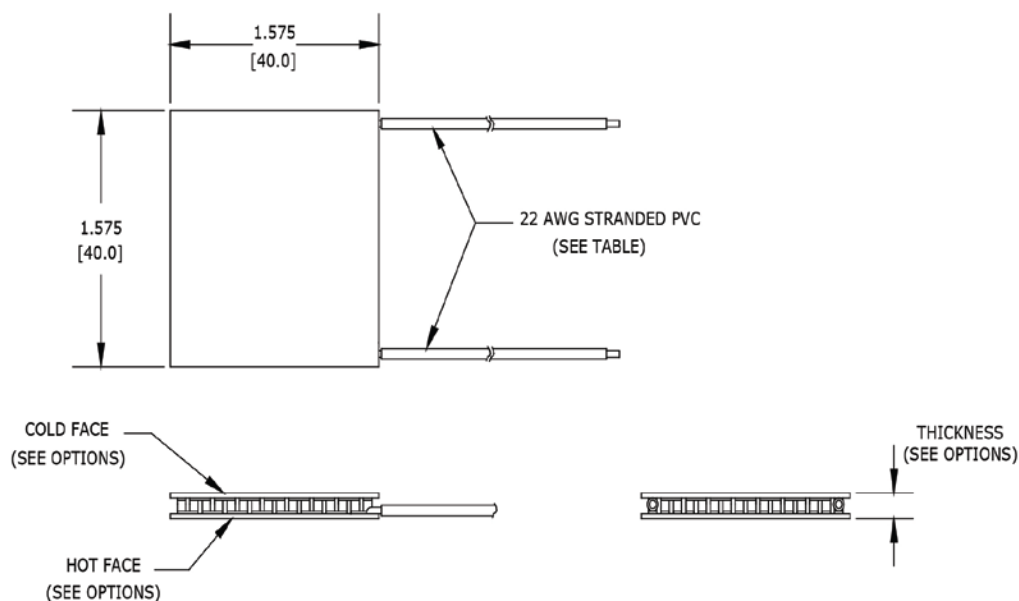
SEALING OPTIONS

| 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 |

PERFORMANCE CURVES



MECHANICAL DRAWING



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

LAIRD-ETS-ZT6-12-F1-4040-DATA-SHEET-101416

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