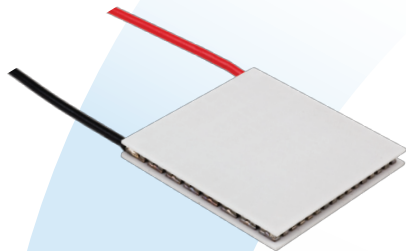


# ZT Series ZT7,16,F1,4040 Thermoelectric Module



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 to reach 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.

## 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)              | 83.9 |
| Delta Tmax (°C)           | 72   |
| I <sub>max</sub> (amps)   | 6.7  |
| V <sub>max</sub> (volts)  | 20.0 |
| Module resistance (ohms)  | 2.53 |

| SUFFIX | THICKNESS          | FLATNESS & PARALLELISM | HOT FACE | COLD FACE | LEAD LENGTH |
|--------|--------------------|------------------------|----------|-----------|-------------|
| TA     | 0.130" +/- 0.001"  | 0.001" / 0.001"        | Lapped   | Lapped    | 14.0"       |
| TB     | 0.130" +/- 0.0005" | 0.0005" / 0.0005"      | Lapped   | Lapped    | 14.0"       |

## 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 |

## global solutions: local support™

Americas: +1 888.246.9050

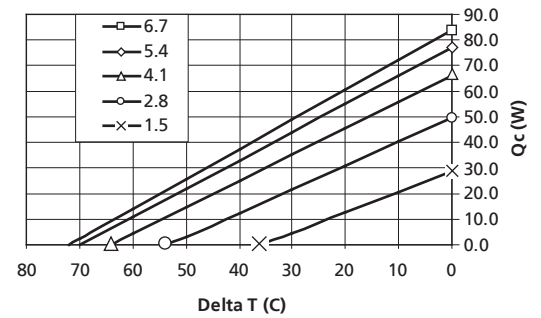
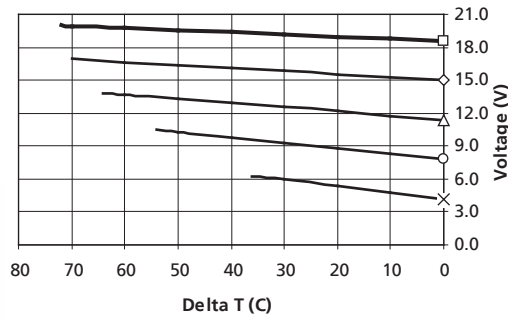
Europe: +46.31.704.67.57

Asia: +86.755.2714.1166

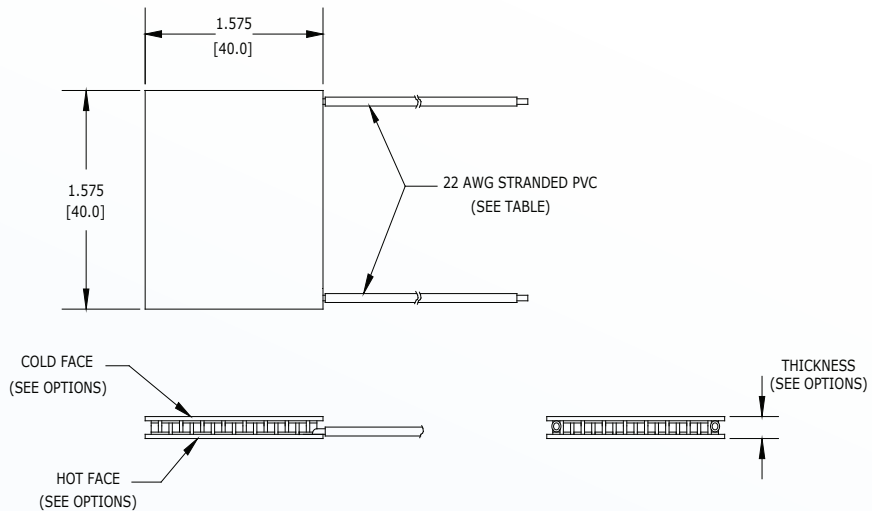
clv.customerpos@lairdtech.com

www.lairdtech.com

### 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

THR-DS-ZT7,16,F1,4040 0909

Any information furnished by Laird Technologies, 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 Technologies materials rests with the end user, since Laird Technologies and its agents cannot be aware of all potential uses. Laird Technologies makes no warranties as to the fitness, merchantability or suitability of any Laird Technologies materials or products for any specific or general uses. Laird Technologies shall not be liable for incidental or consequential damages of any kind. All Laird Technologies products are sold pursuant to the Laird Technologies' Terms and Conditions of sale in effect from time to time, a copy of which will be furnished upon request. © Copyright 2009 Laird Technologies, Inc. All Rights Reserved. Laird, Laird Technologies, the Laird Technologies Logo, and other marks are trade marks or registered trade marks of Laird Technologies, 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 Technologies or any third party intellectual property rights.