



The RH Series is an annular thermoelectric module (TEM) that is round in shape. The hot and cold side ceramics have a circular hole in the center to accommodate light protrusion for optics, mechanical fastening or temperature probe.

This product line is available in multiple configurations. Assembled with Bismuth Telluride semiconductor material and thermally conductive Aluminum Oxide ceramics, the RH 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](http://www.lairdtech.com)

### FEATURES

- Center hole
- Precise temperature control
- Reliable solid state operation
- No sound or vibration
- DC operation
- RoHS compliant

### APPLICATIONS

- Analytical instrumentation
- Clinical diagnostics
- Photonics laser systems
- Industrial instrumentation
- Food & beverage cooling
- Consumer appliances

### SPECIFICATIONS

| TECHNICAL                 |      |      |
|---------------------------|------|------|
| Hot Side Temperature (°C) | 25°C | 50°C |
| Qmax (Watts)              | 12.9 | 14.2 |
| Delta Tmax (°C)           | 67   | 75   |
| Imax (Amps)               | 6.0  | 6.0  |
| Vmax (Volts)              | 3.7  | 4.1  |
| Module Resistance (Ohms)  | 0.57 | 0.64 |

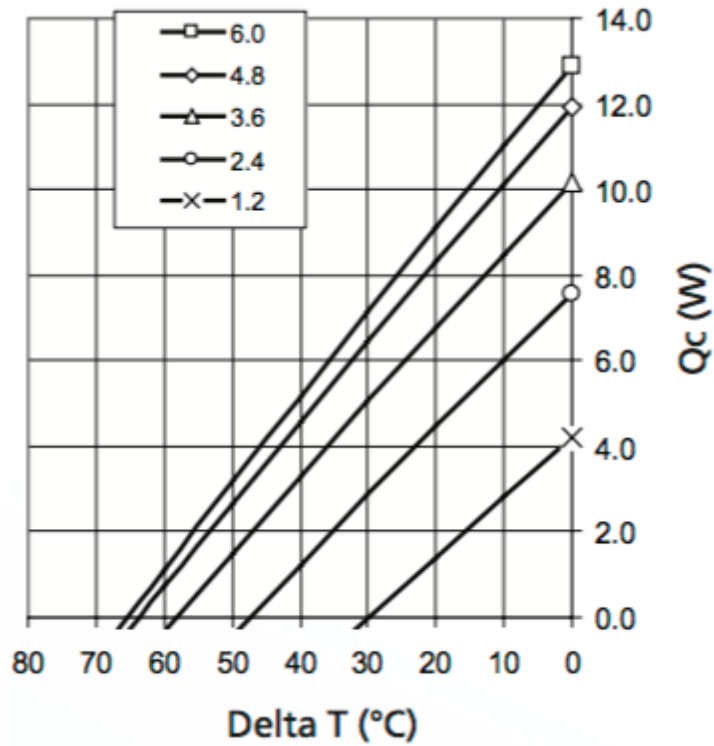
| SUFFIX | THICKNESS<br>(PRIOR TO<br>TINNING) | FLATNESS &<br>PARALLELISM | HOT FACE   | COLD FACE  | LEAD LENGTH |
|--------|------------------------------------|---------------------------|------------|------------|-------------|
| L      | 0.150"±0.010"                      | 0.0015"/0.0015"           | Lapped     | Lapped     | 4.5"        |
| L1     | 0.150"±0.001"                      | 0.001"/0.001"             | Lapped     | Lapped     | 4.5"        |
| L2     | 0.150"±0.0005"                     | 0.0005"/0.0005"           | Lapped     | Lapped     | 4.5"        |
| MM     | 0.158"±0.010"                      | 0.002"/0.002"             | Metallized | Metallized | 4.5"        |

### SEALING OPTIONS

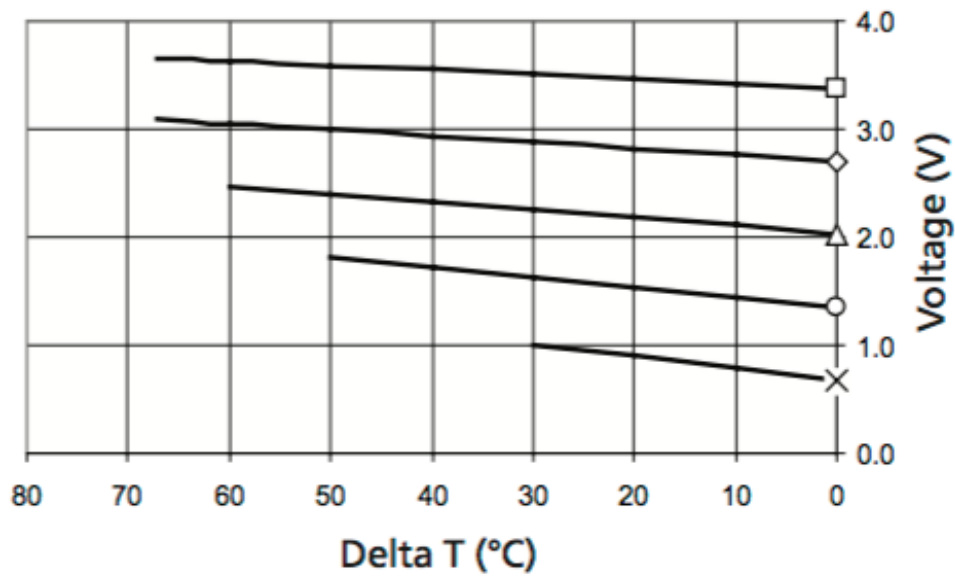
| SUFFIX | SEALANT | COLOR | TEMP RANGE    | DESCRIPTION                                  |
|--------|---------|-------|---------------|----------------------------------------------|
| RT     | RTV     | White | -60 to 204 °C | Non-corrosive, silicone adhesive             |
| EP     | Epoxy   | Black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

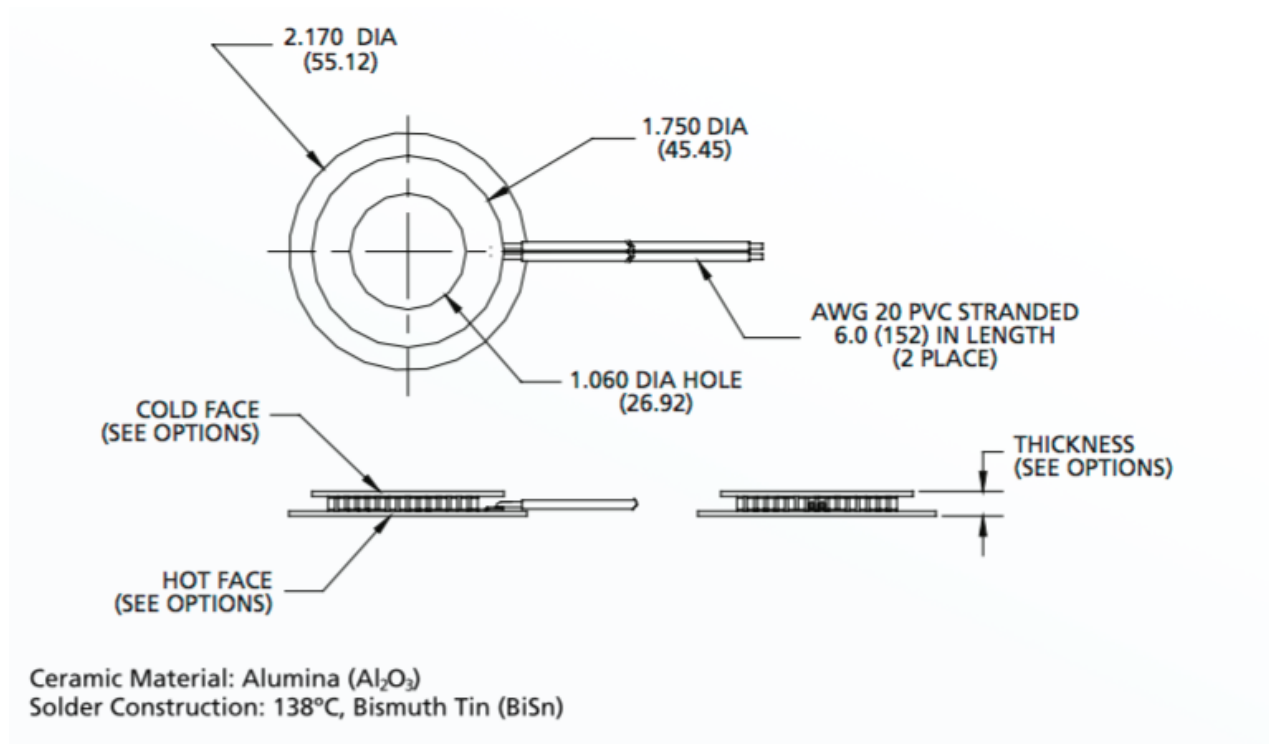
Performance Curves at  $T_h = 25^\circ\text{C}$

THERMO



ELECTRIC





## NOTES

1. Max operating temperature: 80°C
2. Do not exceed I<sub>max</sub> or V<sub>max</sub> when operating module
3. Reference assembly guidelines for recommended installation
4. Solder tinning also available on metallized ceramics

Laird-ETS-RH14-32-10-Data-Sheet-091316

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. Laird Technologies makes no warranties as to the fitness, merchantability, suitability or non-infringement 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 2016 Laird Technologies, Inc. All Rights Reserved. Laird, Laird Technologies, the Laird Technologies Logo, and other marks are trademarks or registered trademarks 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.