



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.

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### 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   |
| I <sub>max</sub> (Amps)   | 6.0  | 6.0  |
| V <sub>max</sub> (Volts)  | 3.7  | 4.1  |
| Module Resistance (Ohms)  | 0.57 | 0.64 |

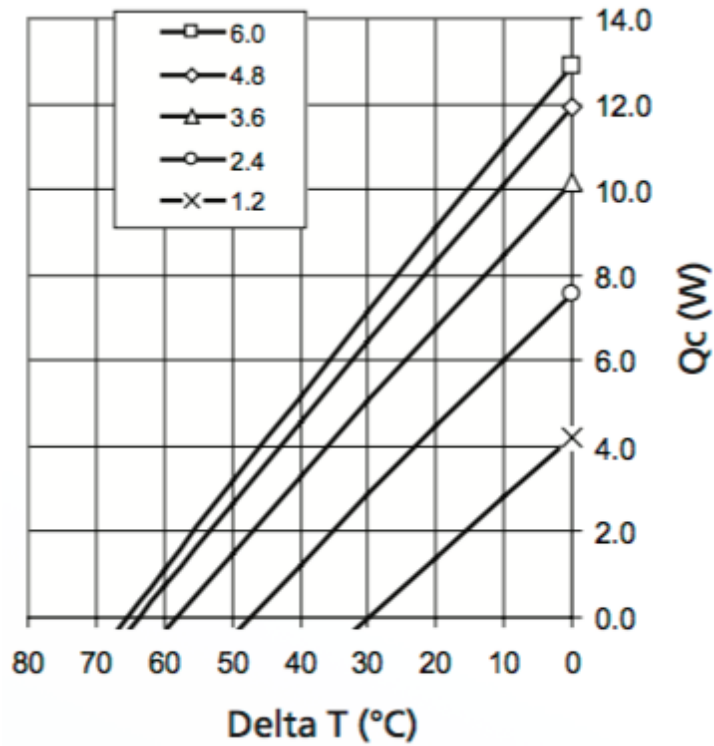
| SUFFIX | THICKNESS<br>(PRIOR TO<br>TINNING) | FLATNESS &<br>PARALLELISM | HOT FACE   | COLD FACE  | LEAD LENGTH |
|--------|------------------------------------|---------------------------|------------|------------|-------------|
| L      | 0.150"±0.010"                      | 0.0015"/0.0015"           | 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

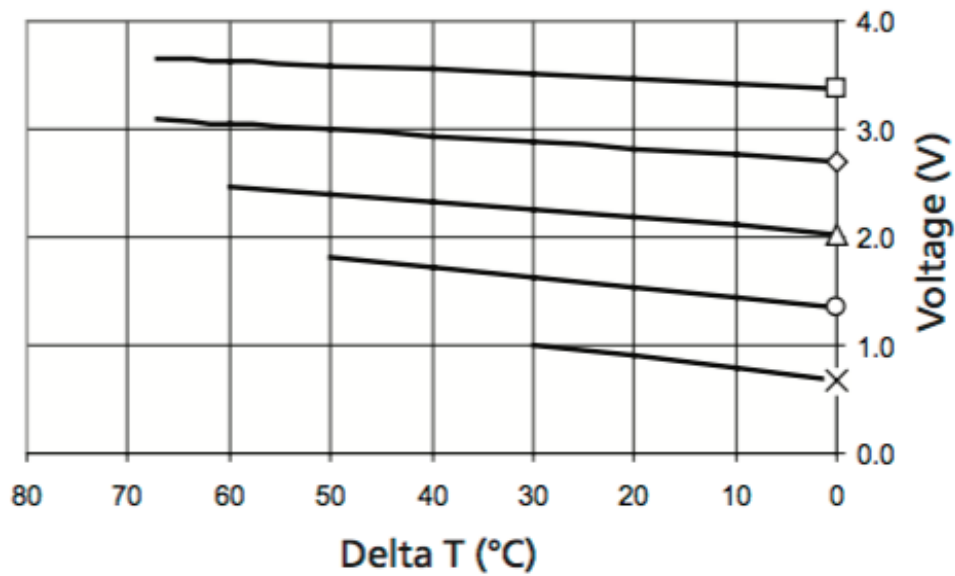
| SUFFIX | SEALANT | COLOR | TEMP RANGE    | DESCRIPTION                                  |
|--------|---------|-------|---------------|----------------------------------------------|
| RT     | RTV     | White | -60 to 204 °C | Non-corrosive, silicone adhesive             |
| EP     | Epoxy   | Black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

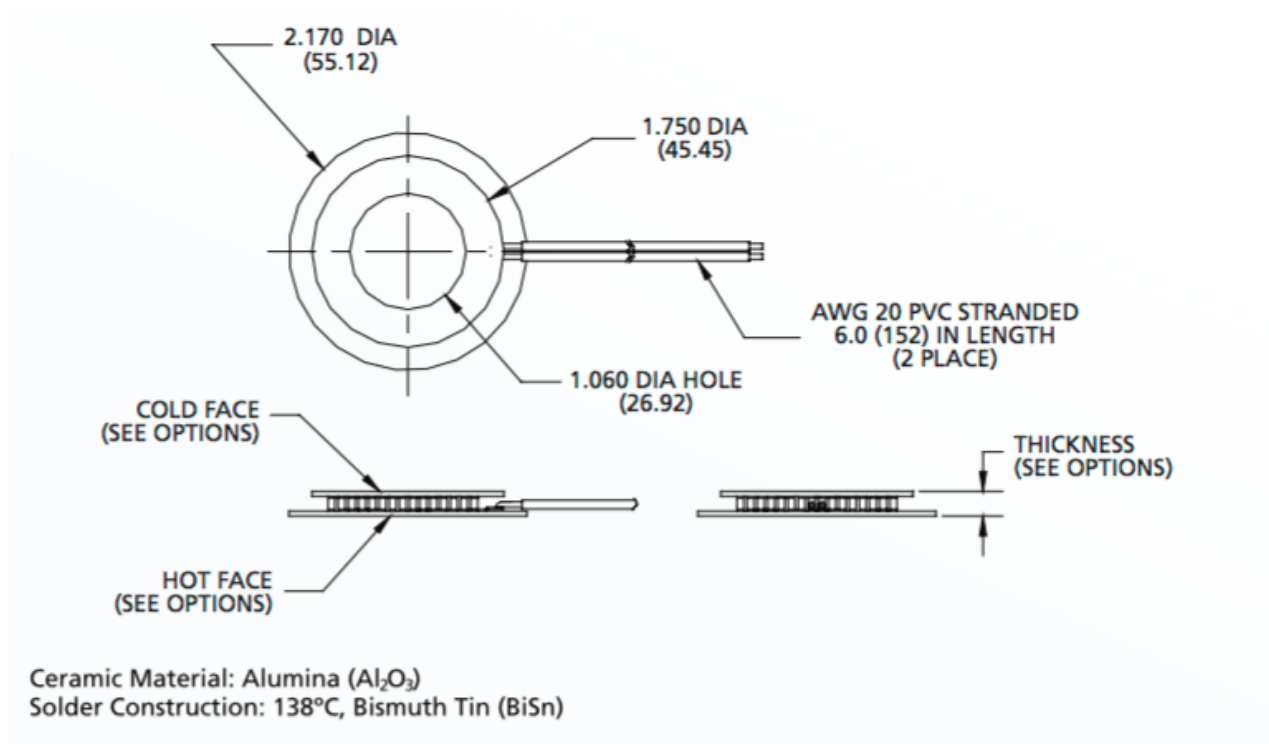
Performance Curves at  $T_h = 25^\circ\text{C}$

THERMO



ELECTRIC





## NOTES

1. Max operating temperature: 80°C
2. Do not exceed  $I_{max}$  or  $V_{max}$  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

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