Annular RH Series Thermoelectric Cooler

The RH14-14-10-L1-W4.5 is an annular thermoelectric cooler 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. It has a maximum Qc of 3.5 Watts when ΔT = 0 and a maximum ΔT of 70.5 °C at Qc = 0.

Features
- Center Hole
- Precise Temperature Control
- No sound or vibration
- Reliable solid-state
- DC Operation
- RoHS-compliant

Applications
- Thermoelectric Coolers for Reagent Storage
- Thermoelectric Coolers for Handheld Cosmetic Lasers
- Cooling for Centrifuges
- Heads-Up Displays, Imaging Sensors
- Peltier Cooling for Machine Vision

ELECTRICAL AND THERMAL PERFORMANCE

Heat Pumped at Cold Side
Thot = 27 °C

Heat Pumped at Cold Side
Thot = 27 °C

Current vs Voltage (I vs V)
Thot = 27 °C
Annular RH Series RH14-14-10-L1-W4.5
MFG Part Number: 71062-514

Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C

Operating Current (Amps)

Operating Voltage (Volts)

Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Thot = 27 °C

Heat Pumped at Cold Side (Qc)
Thot = 27 °C | Current = 3.3 Amps

Coefficient of Performance (COP = Qc/Pin)
Thot = 27 °C | Current = 3.3 Amps
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>27.0 °C</th>
<th>35.0 °C</th>
<th>50.0 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hot Side Temperature</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qcmax (ΔT = 0)</td>
<td>3.5 Watts</td>
<td>3.7 Watts</td>
<td>3.8 Watts</td>
</tr>
<tr>
<td>ΔTmax (Qc = 0)</td>
<td>70.5°C</td>
<td>73.5°C</td>
<td>78.8°C</td>
</tr>
<tr>
<td>Imax (I @ ΔTmax)</td>
<td>3.9 Amps</td>
<td>3.9 Amps</td>
<td>3.8 Amps</td>
</tr>
<tr>
<td>Vmax (V @ ΔTmax)</td>
<td>1.5 Volts</td>
<td>1.6 Volts</td>
<td>1.7 Volts</td>
</tr>
<tr>
<td>Module Resistance</td>
<td>0.37 Ohms</td>
<td>0.38 Ohms</td>
<td>0.41 Ohms</td>
</tr>
<tr>
<td>Max Operating Temperature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8.0 gram(s)</td>
<td></td>
<td></td>
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</table>

* Specifications reflect thermoelectric coefficients updated March 2020

**FINISHING OPTIONS**

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Thickness</th>
<th>Flatness / Parallelism</th>
<th>Hot Face</th>
<th>Cold Face</th>
<th>Lead Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>4.700 ±0.025 mm 0.185 ± 0.001 in</td>
<td>0.025 mm / 0.025 mm 0.001 in / 0.001 in</td>
<td>Lapped</td>
<td>Lapped</td>
<td>114.3 mm 4.50 in</td>
</tr>
</tbody>
</table>

**SEALING OPTIONS**

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Sealant</th>
<th>Color</th>
<th>Temp Range</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td></td>
<td></td>
<td>No sealing specified</td>
</tr>
</tbody>
</table>

**NOTES**

1. Max operating temperature: 80°C
2. Do not exceed Imax or Vmax when operating module
3. Reference assembly guidelines for recommended installation
4. Solder tinning also available on metallized ceramics

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