Thermo Electric designs and manufactures temperature measurement solutions that are guaranteed to give you sensitivity, fast response and consistent accuracy with greatest sensor to sensor uniformity. Thermo Electric is committed to deliver its innovative instrumented wafer solutions on time with a world class technical service.

**PRODUCT TEMPERATURE RANGES**
Low Temp –150 to 800°C  
(Silicon Based Adhesive)

**THERMOCOUPLE CALIBRATION (ACCURACY)**
- **Type K**  
  \(\pm 1.1\, ^\circ\text{C} \text{ or } 0.4\%\)  
  Range –270 to 1372°C  
- **Type N**  
  \(\pm 1.1\, ^\circ\text{C} \text{ or } 0.4\%\)  
  Range –270 to 1300°C  
- **Type E**  
  \(\pm 1.0\, ^\circ\text{C} \text{ or } 0.4\%\)  
  Range –270 to 1000°C  
- **Type R/S**  
  \(\pm 1.5\, ^\circ\text{C} \text{ or } 0.25\%\)  
  Range –50 to 1768°C

**SPECIFICATIONS**

**Sensor Leads**
Up to 35 ft. – Customization available

**Insulations available**
- Quartz  
- Teflon  
- Ceramic  
- Polyimide  
- Silica

**Wire Gauges**
20 AWG – 40 AWG

**Terminations**
- Mini Plugs standard and High Temperature Ceramic  
- D–Pin Subminiature Standard Connectors  
- Ultra High Vacuum (UHV) Peek Connectors – Sub C & D  
- Spade Tang  
- Vacuum Contacts Pins & Sockets 0.056” & 0.040”  
- Bare Wire

**Substrates**
Silicon, AlTiC, Glass, Ceramic and other supplied  
Bare, Coated, or Patterned substrates. Other custom substrates, shapes and sizes available

**Substrate Sizes Offered**
100mm, 125mm, 150mm, 200mm, 300mm

**Feedthrough**
Polyimide flat cable with seal under O–ring, atmosphere to \(10^{-7}\) Torr capable. Length designated by customer.

**PAIR THICKNESS**

<table>
<thead>
<tr>
<th>Substrate Size</th>
<th>100mm</th>
<th>125mm</th>
<th>150mm</th>
<th>200mm</th>
<th>300mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.056” &amp; 0.040”</td>
<td>1.050mm +/- 0.050</td>
<td>1.250mm +/- 0.050</td>
<td>1.350mm +/- 0.050</td>
<td>1.450mm +/- 0.050</td>
<td>1.550mm +/- 0.050</td>
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</tbody>
</table>