### Dimension and Weight (Mass) Table

<table>
<thead>
<tr>
<th>H Height ±0.5 mm</th>
<th>PCB Mass</th>
<th>Tungsten Balls in Cavity</th>
<th>Total PID Mass</th>
<th>Screw Adjust</th>
<th>Screw Hex Head</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Ø Dia</td>
<td>Per Ball</td>
<td>QTY</td>
<td>Mass</td>
</tr>
<tr>
<td>4.0mm</td>
<td>90g</td>
<td>1.5mm</td>
<td>0.031g</td>
<td>290~300</td>
<td>9.0g</td>
</tr>
<tr>
<td>4.5mm</td>
<td>120g</td>
<td>2.0mm</td>
<td>0.073g</td>
<td>160~170</td>
<td>12.0g</td>
</tr>
<tr>
<td>5.0mm</td>
<td>130g</td>
<td>2.3mm</td>
<td>0.102g</td>
<td>120~125</td>
<td>13.0g</td>
</tr>
<tr>
<td>7.5mm</td>
<td>140g</td>
<td>2.5mm</td>
<td>0.143</td>
<td>95~100</td>
<td>14.0g</td>
</tr>
</tbody>
</table>

### Notes:

1. DIMENSIONS INCH (min)
2. APPLICATION NOTES:
   Contact TopLine for help to select the best PID for your application.
3. NOTES 2 MOUNTING STYLE (Replace N)
   1= LGA (FL)  4= BGA SAC305 (FB)
   2= SCREW (FS)  5= BGA SnPb (FP)
   3= ADHESIVE (FA)  9= CUSTOM
MODELS
ATTACHMENT VARIATIONS

TOP
STYLE EL
EMPTY

BOTTOM
STYLE FL
LGA PADS

BOTTOM
BGA SOLDERBALL
STYLE FB = SAC305 RoHS
STYLE FP = SnPb

STYLE FA
ADHESIVE
(GLUE)
# PART NUMBER SYSTEM

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>F</strong></td>
<td><strong>A</strong></td>
<td><strong>12</strong></td>
<td><strong>SQ</strong></td>
<td><strong>35x</strong></td>
<td><strong>5.0</strong></td>
<td><strong>A</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mounting on PCB</td>
<td>Tungsten Mass Grams (Mins.)</td>
<td>Shape</td>
<td>X/Y Size</td>
<td>Height</td>
</tr>
<tr>
<td><strong>Filled</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F = FR4 Case</td>
<td>A = Al Case</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Empty</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E = FR4 Case</td>
<td>L = Al Case</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

- **Filled**:
  - F = FR4 Case
  - A = Al Case

- **Empty**:
  - E = FR4 Case
  - L = Al Case

### Mounting Style
- A = Adhesive
- L = LGA
- NiAu Solderable
- Bottom Terminal

- B = BGA
- SAC Solder Ball
- P = BGA
- SnPb Solder Ball
- S = SCREW Fastener

- **Code ● Description**
  - 1 = Filled PID
  - 5 = Eng Dev Kit
  - 7 = Empty Pkg

### Tungsten Mass Grams (Mins.)
- 9.0 = 9.0gm
- 12 = 12.0gm
- 13 = 13.0gm
- 14 = 14.0gm

### Shape
- SQ = Square
- R = Rectangle
- C = Cylindrical
- T = Toroid
- Z = Custom

### X/Y Size
- 35x = 35mm SQ
- 40 = 4.0mm
- 45 = 4.5mm
- 50 = 5.0mm
- 75 = 7.5mm

### Version/Option
- A = Standard
- T = Tunable

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### ORDER NUMBER

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
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<td><strong>1</strong></td>
<td><strong>3</strong></td>
<td><strong>013</strong></td>
<td><strong>1</strong></td>
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<tr>
<td></td>
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<td>Mass (gram)</td>
<td></td>
<td>Code ● Grams</td>
<td>Code Mil</td>
<td></td>
</tr>
<tr>
<td>Code ● Description</td>
<td>Code ● Description</td>
<td>Code ● Grams</td>
<td>Code Mil</td>
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<tr>
<td>1 = Filled PID</td>
<td>1 = LGA</td>
<td>990 = 9.0gm</td>
<td>1 = Version A</td>
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<tr>
<td>2 = Screw</td>
<td>2 = Screw</td>
<td>012 = 12.0 gm</td>
<td>2 = Version B</td>
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<tr>
<td>3 = Adhesive</td>
<td>3 = Adhesive</td>
<td>013 = 13.0 gm</td>
<td>3 = Version C</td>
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<td>4 = BGA SAC305</td>
<td>4 = BGA SAC305</td>
<td>014 = 14.0 gm</td>
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<tr>
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<td>5 = BGA Sn63/Pb37</td>
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<td>9 = Custom</td>
<td>9 = Custom</td>
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**TopLine**

**Title**: EL-SQ35-Z
**PID VIBRATION DAMPER**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Size</th>
<th>Drawing No.</th>
<th>Rev</th>
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</thead>
<tbody>
<tr>
<td>NONE</td>
<td>A</td>
<td>703526</td>
<td>A</td>
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</tbody>
</table>

**DO NOT SCALE DRAWING**
**Sheet 3 of 3**