



stb Ceramics Piezoceramics Shapes

Typical Dimensional Specifications:

| | Disc Products | Sheet Products |
|--------------------|---------------------------------|---|
| Diameter | 1mm+/-0.02 ~ 180mm+/-0.1 | 1x1mm ² +/-0.02 ~ 200X300mm ² +/-0.1 |
| Thickness | 0.05mm+/-0.01 ~ 20mm+/- 0.05 | 0.1mm+/-0.01 ~ 20mm+/-0.05 |
| Flatness | 0.003 ~ 0.01 | 0.01 ~ 0.01 |
| Parallelism | 0.02TIR ~ 0.02TIR | 0.02TIR ~ 0.02TIR |

Screen Printing/Sintered: Silver



Tolerances

We provide piezo ceramic elements manufactured to the industry tolerance values listed here. We can prepare elements to tighter tolerances on request. Items also are available "as fired" (no OD, ID, length or width machining), when dimensional requirements are not critical.

Standard tolerances for electrical / piezoelectric characteristics are:

- capacitance: $\pm 20\%$
- d33 value: $\pm 20\%$
- frequency: $\pm 5\%$ (to $\pm 0.5\%$ on request)

We will attach electrical leads on request. Standard leads are:

- 28AWG / 2" or 4" long
- or 26AWG / 1.25", 4", or 6" long
- parallel arranged.

Please be specific when requesting parts, tolerances, or electrode patterns. Provide drawings or sketches for parts or electrode patterns, and include ID tolerance if requesting rings or cylinders (tubes). For custom electrical leads, please specify AWG and length and provide a drawing showing the desired locations.

Standard Machining Tolerances for Ceramic Parts

| Nominal Value | Standard Tolerance (\pm) |
|---|------------------------------|
| <i>Disc/Ring/Cylinder (Tube): Outer Diameter</i> | |
| <25 mm | 0.25 mm |
| 25 mm to <38 mm | 0.38 mm |
| 38 mm to <50 mm | 0.60 mm |
| 50 mm | 1.00 mm |
| <i>Ring/Cylinder (Tube): Inner Diameter</i> | |
| <6 mm | 0.25 mm |
| 6 mm to <13 mm | 0.38 mm |
| 13 mm to <25 mm | 0.50 mm |
| 25 mm | 0.60 mm |
| <i>Plate: Length or Width</i> | |
| <13 mm | 0.13 mm |
| 13 mm to <25 mm | 0.25 mm |
| 25 mm to 38 mm | 0.38 mm |
| 38 mm to <50 mm | 0.60 mm |
| 50 mm | 1.00 mm |
| <i>All Parts: Thickness</i> | |
| 0.20 mm to <5.00 mm | 0.025 mm |
| 5.00 mm | 0.05 mm |