# **Ceramic Manufacturing**

### Molded and Additive

MSI Ceramics is a non-traditional manufacturer that leverages new technologies to create unique structures that are not easily achievable with traditional forming techniques.

MSI Ceramics specializes in near net shape injection molded piezoceramics, custom shaped piezoceramics, 3D printed piezoceramics, and LoQ piezoceramics.

- Injection Molded and 3D Printed
- Piezocomposites and LoQ Materials
- Custom Shapes

### **Injection Molded**

MSI's revolutionary injection molded piezoceramic process allows parts to be made near net shaped through a processes similar to plastic injection molding.

- · Low cycle time versus traditional methods
- Minimize any secondary processing
- · Consistent properties with uniform, fine grain size



#### Customized to Meet Your Requirements

MSI specializes in custom designed configurations and materials.

#### Call us today at 1.978.486.0404

Email: sales@msitransducers.com

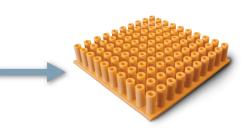
### **Ceramic Powder**

MSI mixes our own powder for many applications, which increases control of critical properties that are important to your application.

PZT 5	PZT 4	Custom
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Vertically integrated from raw materials to finished product.



## **3D Printed**

MSI's 3D printed piezoceramics offer a number of unique advantages over traditional ceramic manufacturing, all while having the same, or better, material properties than conventional ceramic.

- Able to print unique structures that cannot be made using conventional manufacturing processes
- Printing allows rapid prototyping and development

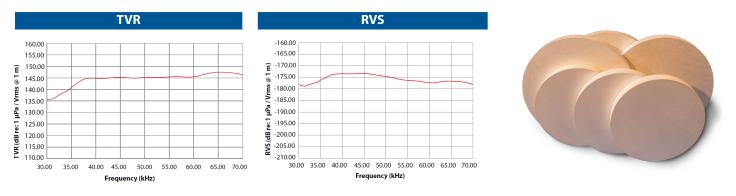
### Design Cycle Advantage

The combination of reduced manufacturing times, and lower costs, allows designers to make quick prototypes to test designs without having to wait weeks for parts to be made using traditional manufacturing.



### LoQ Ceramic

MSI's LoQ piezoceramic material provides greater bandwidth than traditional ceramics. This material can be injection molded using our standard injection molded process enabling MSI to efficiently produce standard shapes as well as complex geometries.



#### DESIGN • PROTOTYPES • LOW VOLUME PRODUCTION • HIGH VOLUME PRODUCTION • CUSTOMIZATION

#### **About MSI Ceramics**

MSI Ceramics of Littleton, MA, is a product group within MSI Transducers and has been making piezoceramic for internal use for over 20 years. In addition to ceramics manufacturing, MSI can provide additional value add assembly to your products. From adding wires to full overmolded assemblies, MSI is your one-stop shop.

Whether you need a custom designed product or just looking for a source to build your existing design, MSI is the right choice.

543 Great Road • Littleton, MA 01460 Tel: 1.978.486.0404 Email: sales@msitransducers.com

www.msiceramics.com



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