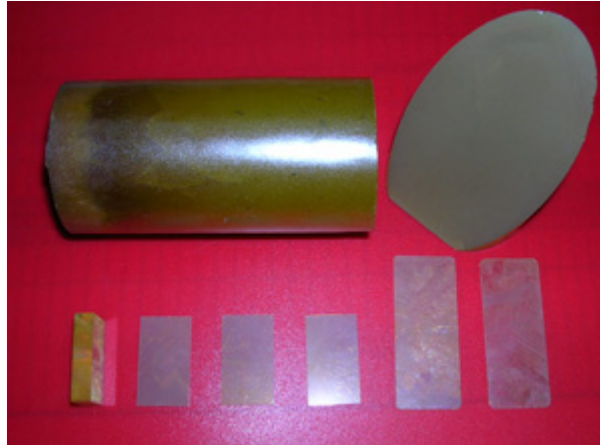


PMN-PT Crystal

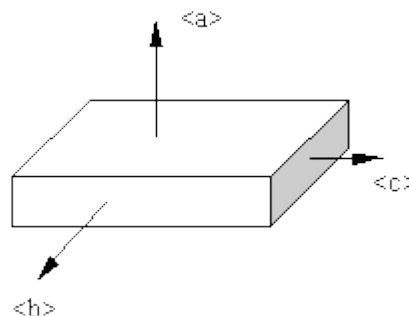


The lead magnesium niobate-lead titanate (PMN-PT) crystal is a new generation of piezoelectric materials. The chemical structural formula of PMN-PT is $(1-x)[\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3]-x[\text{PbTiO}_3]$. The PMN-PT is formulated to exhibit high piezoelectric coefficient, large electric-mechanical coupling coefficient, high dielectric constants and low dielectric losses. As a rule, the piezoelectric coefficient is higher than PZT ceramics, which results in improving bandwidth, sensitivity and source level in applications. We could provide high quality PMN-PT crystals with the diameter of 2 inches for a broad range of applications.

Typical Capability of PMN-PT [001]

The application of Vibration

- ◇ Radial Extension
- ◇ Longitudinal Extension
- ◇ Transverse Extension
- ◇ Longitudinal Shear
- ◇ Transverse Shear



Reference Capability of PMN-PT Crystal Properties Dependence on Crystallographic Direction of PMN-PT Crystal These typical values are provided for design information only. Standard tolerances are approximately $\pm 20\%$ of these values. Material properties are measured according to standard IEEE and DOD definitions and measuring techniques. All data shown represent nominal characteristics (20 °C) 24 hours after polarization.

Electrodes

- ◇ Ag 0.07um
- ◇ Au (Cr or Ni/Au/Ag/Au) 1000-10000
- ◇ Pt 0.07um

