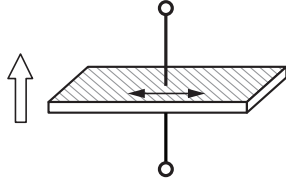
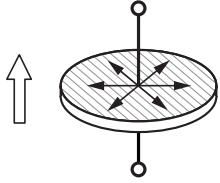
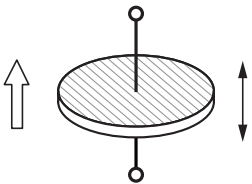
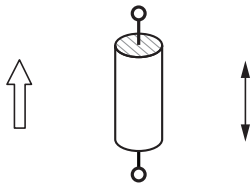
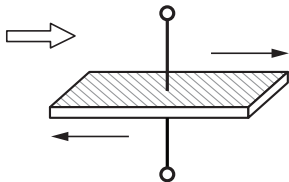


# Definitions & Terminology

## PIEZOELECTRIC MODES OF VIBRATION

Vibration Mode	Dimensions	Constants to be Calculated	
	L-Length W-Width T-Thickness D-Diameter	Piezoelectric	Mechanical
Transverse Length Mode	 <p><math>T, W &gt; L/3</math></p>	$k_{31}, d_{31}, g_{31}, \epsilon_{33}^T$	$s_{11}^D, s_{11}^E, Q_{31}$
Radial Mode	 <p><math>D &gt; 5T</math></p>	$k_p, \epsilon_{33}^S, \epsilon_{33}^T$	$\sigma^E, s_{12}^E, Q_p$
Thickness Extension Mode	 <p><math>D &gt; T</math></p>	$K_t, \epsilon_{33}^S$	$c_{33}^D, c_{33}^E, s_{13}^E, Q_t$
Longitudinal Length Mode	 <p><math>D &gt; L/5</math></p>	$k_{33}, d_{33}, g_{33}, \epsilon_{33}^T$	$s_{33}^D, s_{33}^E, Q_{33}$
Thickness Shear Mode	 <p><math>L, W &gt; 8T</math></p>	$k_{15}, d_{15}, g_{15}, \epsilon_{11}^T, \epsilon_{11}^S$	$c_{55}^D, s_{55}^D, s_{55}^E, Q_{15}$