

A θ -Z actuator

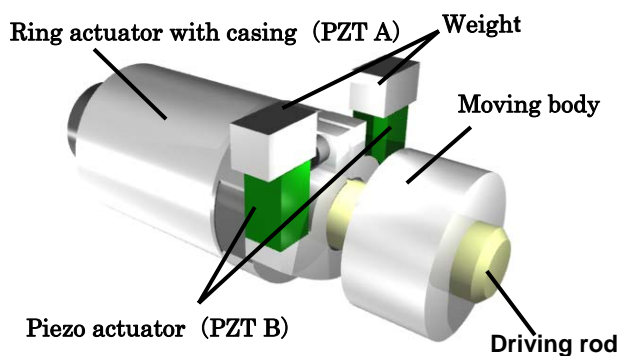
JPAN 2005-219823

Introduction

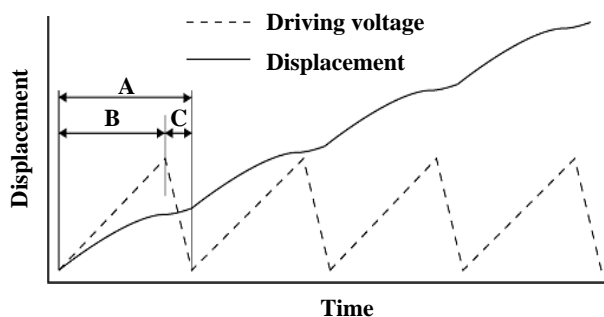
It is increasingly important to manipulate cells and micro-parts

➔ It is necessary to move micro-parts in θ -Z over a long stroke and with a high resolution

Schematic of the actuator



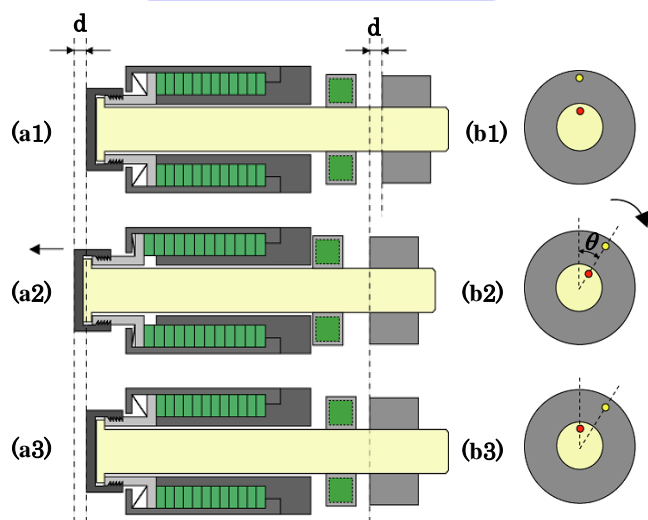
Applied voltage and displacement



To generate difference of velocity between the moving body and rod

Principle and results

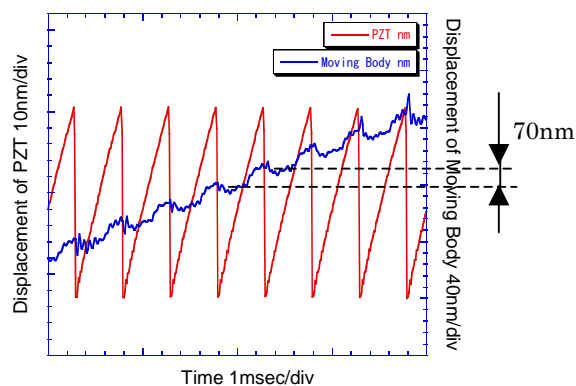
Principle



Features of the actuator

- θ -Z bi-axis motions
- High resolution
- Long stroke
- High-precision
- Compact and non-magnetic

Results (Z-motion)



➔ Realize a 70nm step drive

Results (θ -motion)

