

## Product-Specification

| Product                            | HPO-a5 Piezo Stacks  |            |            |            |            |      |           |
|------------------------------------|----------------------|------------|------------|------------|------------|------|-----------|
| Product-Number                     | HPO-a50015           | HPO-a50030 | HPO-a50050 | HPO-a50100 | HPO-a50150 | Unit | Tolerance |
| Expansion (0..150 V)               | 15                   | 30         | 45         | 90         | 135        | μm   | ±10%      |
| Expansion (-45..180 V)             | 23                   | 47         | 72         | 143        | 216        | μm   | ±10%      |
| Resolution, open loop              | 0.1                  | 0.2        | 0.3        | 0.5        | 1          | nm   | RMS       |
| Push/Pull                          | 1400/100             |            |            |            |            | N    | max.      |
| Stiffness                          | 70                   | 37         | 25         | 12         | 9          | N/μm | ±10%      |
| Torque, head-piece to body         | 0.4                  |            |            |            |            | Nm   | max.      |
| Resonance, unloaded                | 20                   | 16         | 12         | 9          | 6          | kHz  | ±10%      |
| el. Capacitance @ 1V RMS, 1 kHz    | 1.1                  | 2.2        | 3.3        | 6.6        | 9.9        | μF   | ±10%      |
| Overall Length, L                  | 24                   | 34         | 44         | 74         | 104        | mm   | ±0.3      |
| Mass w/o Wires                     | 15                   | 20         | 25         | 40         | 55         | g    | ± 10%     |
| Material, Encapsulation, Endpieces | stainless steel      |            |            |            |            |      |           |
| Operating-Temperature              | -40..+80             |            |            |            |            | °C   |           |
| Connection Wire, 1.5 m, w/o Socket | a=P, e.g. HPO-P50015 |            |            |            |            |      |           |
| Connection Wire, 1.5 m, w/ Lemosa  | a=L, e.g. HPO-L50015 |            |            |            |            |      |           |

### Options:

- Versions with position-sensors
- Versions with 60 V nominal voltage
- Spherical End-Pieces
- Suitable Electrical Drivers, e.g. EBO-050100

