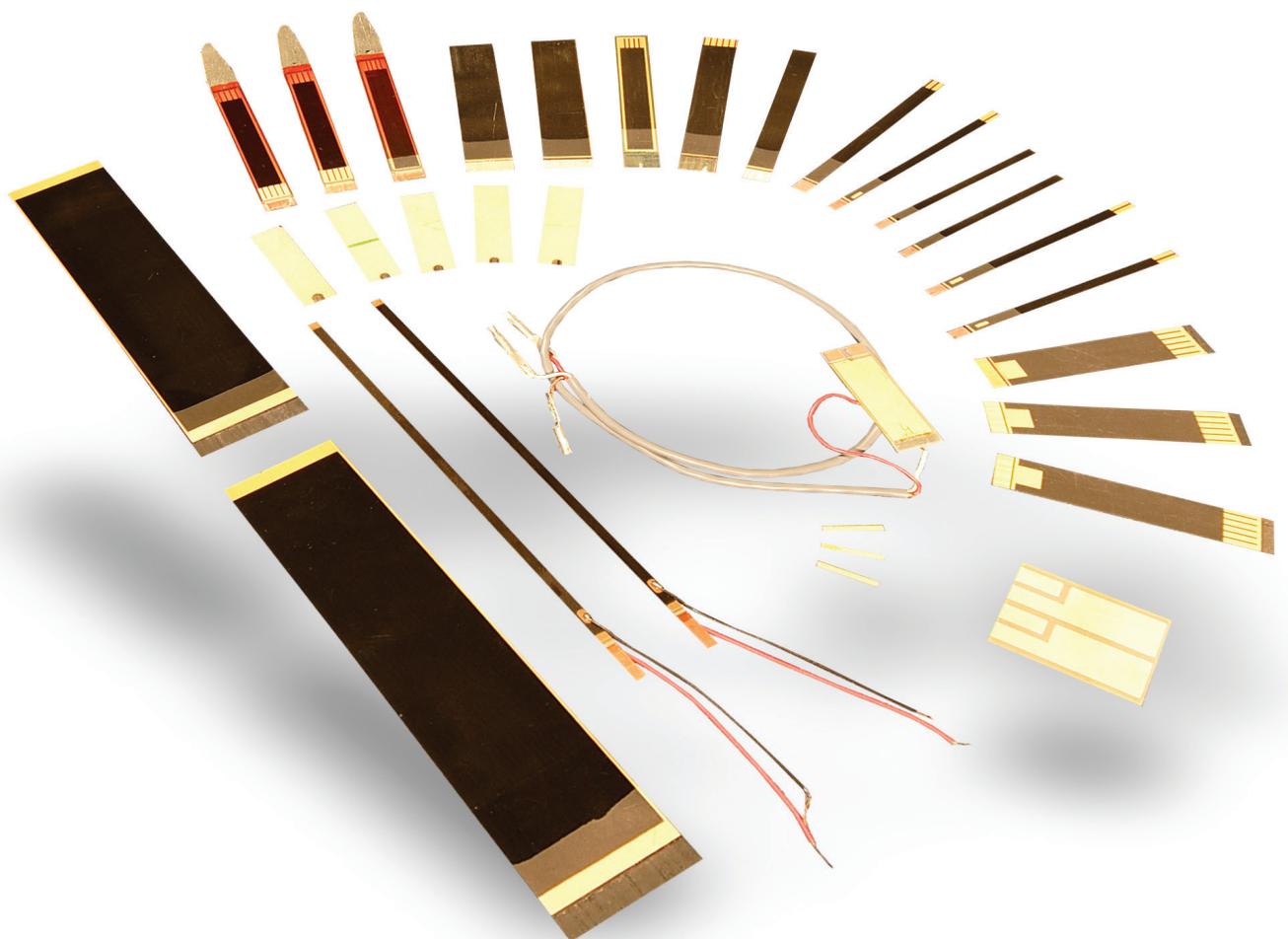




Johnson Matthey
Inspiring science, enhancing life

Piezo technical sheet



Product	Specifications	Features
Piezo Ceramic Material	<ul style="list-style-type: none"> Plates of our piezo ceramic materials, see table "Piezoceramic Masses, data sheet" (1), bare or metallized, polarized, tested. Dimensions: Plates length / width usually several cm Thickness typically 0.1 mm to 1 μm Cutting of piezo ceramic plates to customized shapes, also in <mm level 	<ul style="list-style-type: none"> Standard piezo ceramic plate example: M11100 ca. 46.9mm x 23mm x 0.26mm, sputter metallized, polarized, tested Cutting to customized dimensions
Piezo Ceramic Bending Actuator	<ul style="list-style-type: none"> Forces from mN up-to several N Deflection from nm up-to several mm Dimensions: Length/width from 1mm to 100mm Usual thickness 0.5mm to 1mm See some examples in the table "Overview Piezo Benders" (2) Used in medical implants 	<ul style="list-style-type: none"> Extremely low energy consumption No heat production Proportional deflection/force versus voltage Silent operation Small size Light in weight Long-term durability and reliability Rapid speed Antimagnetic Makes intrinsic safety (Ex) possible
Piezo Ceramic Bending Sensor	<ul style="list-style-type: none"> Piezo materials are highly sensitive Bandwidth from 0.1Hz up-to several kHz / MHz Used in medical implants 	<ul style="list-style-type: none"> Sensing of impulses (mechanical, acoustical etc.)
Nebulizer Technology for Inhalation	<ul style="list-style-type: none"> Nebulization of liquids (water like liquids) Based on ultrasound cavitation principle From μl/h to 0.5l/h 	<ul style="list-style-type: none"> Fine droplet size, typical MMD 5μm Medical inhalation therapy, nebulization of drugs
Piezo Components for Microfluidics, Micropumps	<ul style="list-style-type: none"> Design and mass production of piezo ceramic components and assemblies of such for use in microfluidic and micropumps 	<ul style="list-style-type: none"> Extremely low energy consumption No heat production Proportional deflection/force versus voltage Silent operation Small size Light in weight Long-term durability and reliability Rapid speed Antimagnetic Makes intrinsic safety (Ex) possible

For more information on Piezo Ceramics from Johnson Matthey please visit

www.piezoproducts.com

(1) (2) [piezoproducts.com/en/service/downloads](http://www.piezoproducts.com/en/service/downloads)

