Title (en)
MICROPUMP

Title (de)
MIKROPUMPE

Title (fr)
MICROPOMPE

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Abstract (en)
[origin: US5759015A] PCT No. PCT/IB94/00435 Sec. 371 Date Jun. 5, 1996 Sec. 102(e) Date Jun. 5, 1996 PCT Filed Dec. 21, 1994 PCT Pub. No. WO95/18307 PCT Pub. Date Jul. 6, 1995A micropump including two glass sheets (2, 8) with a machined silicon board (6) sealingly inserted therebetween. An inlet valve (12), a pumping chamber (50) and an outlet valve (28) are arranged between an inlet (10) and an outlet (4). A pump diaphragm (56) forming one wall of the pumping chamber comprises a thickened central portion (58) interacting with the upper sheet (8) to form an abutment restricting the suction movement of the diaphragm (50), and lower abutment elements (60) restricting the movement of the diaphragm when the fluid is discharged. A piezoelectric pad (72) engages the diaphragm by means of an intermediate part (84) to perform the pumping movement between upper and lower limits precisely defined by the abutments. A precisely defined and constant flow rate is thus achieved regardless of changes in the performance of the piezoelectric pad.

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