

## Supplementary Information

### Wrist flexible heart pulse sensor integrated with a soft pump and a pneumatic balloon membrane

Takafumi Yamaguchi<sup>1</sup>, Daisuke Yamamoto<sup>1</sup>, Takayuki Arie<sup>1</sup>, Seiji Akita<sup>1</sup>, Kuniharu Takei<sup>\*1,2</sup>

<sup>1</sup>Department of Physics and Electronics, Osaka Prefecture University, Sakai, Osaka 599-8531, Japan

<sup>2</sup>Japan Science and Technology, PRESTO, Kawaguchi, Saitama 332-0012, Japan

\*Corresponding author: [takei@pe.osakafu-u.ac.jp](mailto:takei@pe.osakafu-u.ac.jp)

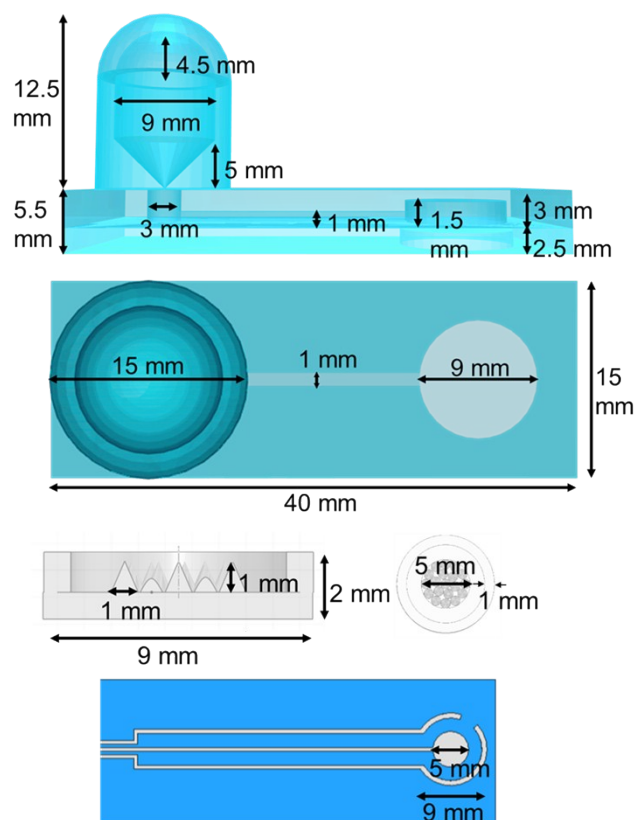


Figure S1. Design of the device.

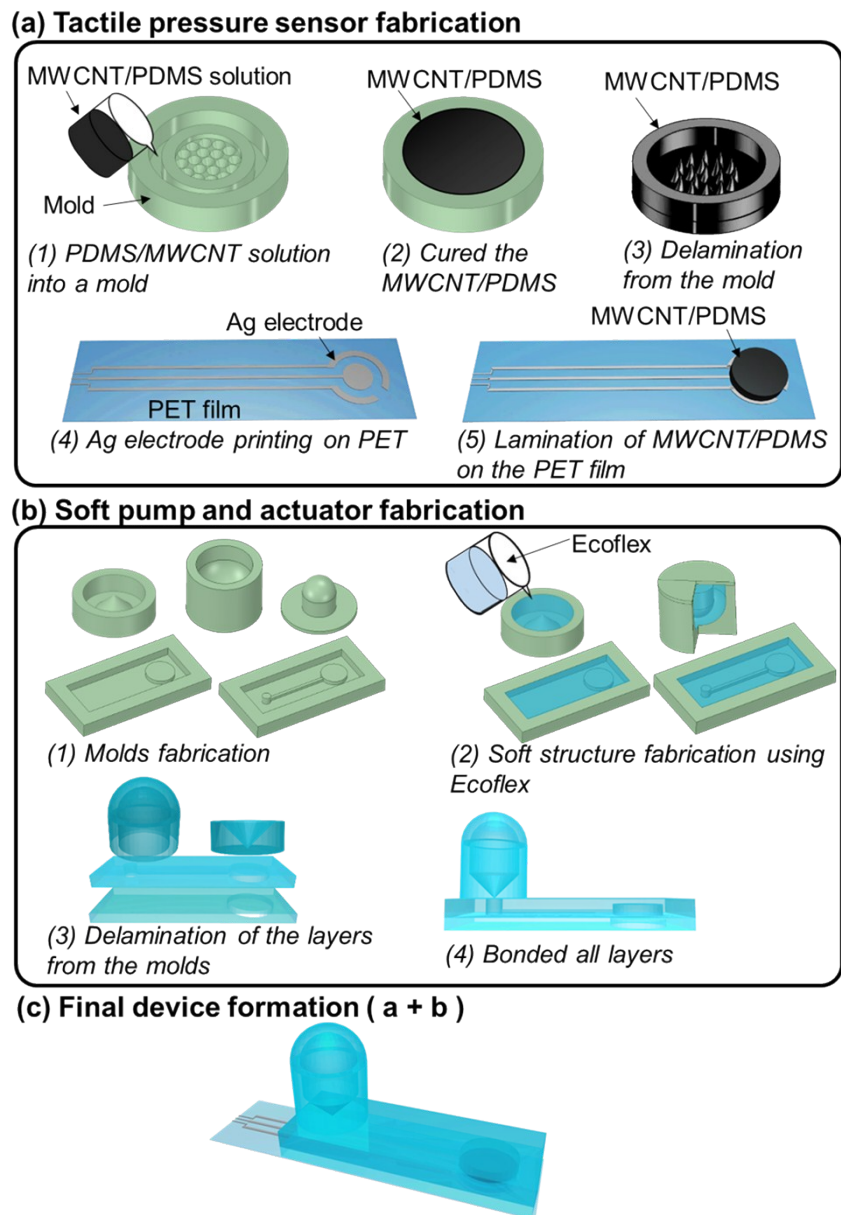


Figure S2. Fabrication processes of (a) the tactile pressure sensor, (b) soft pump and actuator, and

(c) final device structure.