

# High Channel Temperature Mapping Electronics in A Thin, Soft, Wireless Format for Non-invasive Body Thermal Analysis

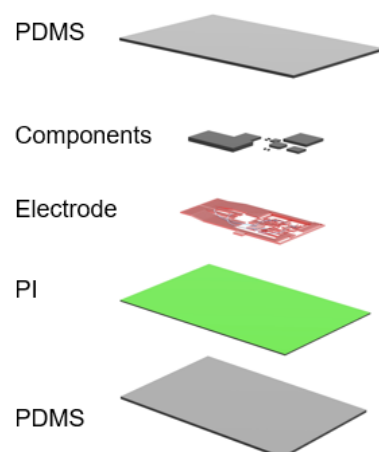
Wooyoung Park <sup>1,†</sup>, Chunki Yiu <sup>1,2,†</sup>, Yiming Liu <sup>1</sup>, Tsz Hung Wong <sup>1</sup>, Xingcan Huang <sup>1</sup>, Jingkun Zhou <sup>1,2</sup>, Jian Li <sup>1,2</sup>, Kuanming Yao <sup>1</sup>, Ya Huang <sup>1,2</sup>, Hu Li <sup>1</sup>, Jiyu Li <sup>1,2</sup>, Yanli Jiao <sup>1</sup>, Rui Shi <sup>1</sup> and Xinge Yu <sup>1,2,\*</sup>

<sup>1</sup> Department of Biomedical Engineering, City University of Hong Kong, Hong Kong 999077, China; wy-park2@um.cityu.edu.hk (W.P.); chunkiyiu2-c@my.cityu.edu.hk (C.Y.); lyiming2-c@my.cityu.edu.hk (Y.L.); thwong247-c@my.cityu.edu.hk (T.H.W.); xhuang439-c@my.cityu.edu.hk (X.H.); jinggzhou3-c@my.cityu.edu.hk (J.Z.); jian.li@my.cityu.edu.hk (J.L.); km.Yao@my.cityu.edu.hk (K.Y.); yhuang@hkco-che.org (Y.H.); huli23@cityu.edu.hk (H.L.); jiyuli2-c@my.cityu.edu.hk (J.L.); yanlijiao2-c@my.cityu.edu.hk (Y.J.); rshi@connect.hku.hk (R.S.)

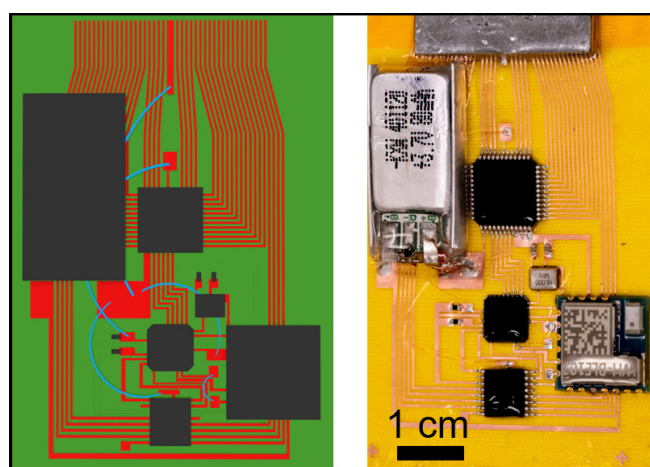
<sup>2</sup> Hong Kong Center for Cerebra-Cardiovascular Health Engineering, Hong Kong Science Park, New Territories, 999077 Hong Kong China

\* Correspondence: xingeyu@cityu.edu.hk

† These authors contributed equally to this work.



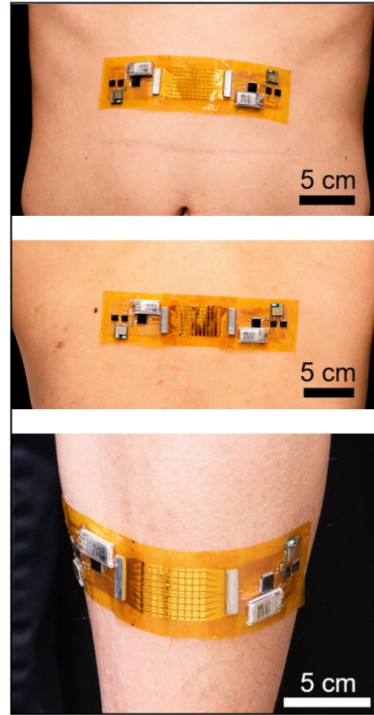
**Figure S1.** The schematic illustration of the controlling panel of the WH-sensor.



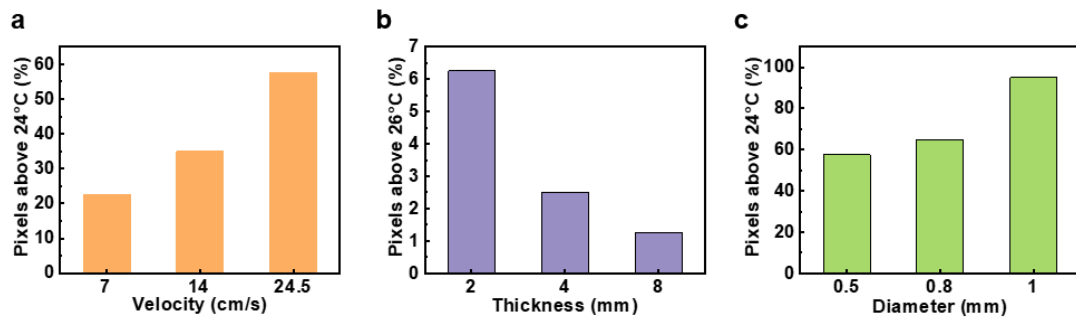
**Figure S2.** The schematic illustration of the circuit design of the controlling panel of the WH-sensor and its equivalent optical image.



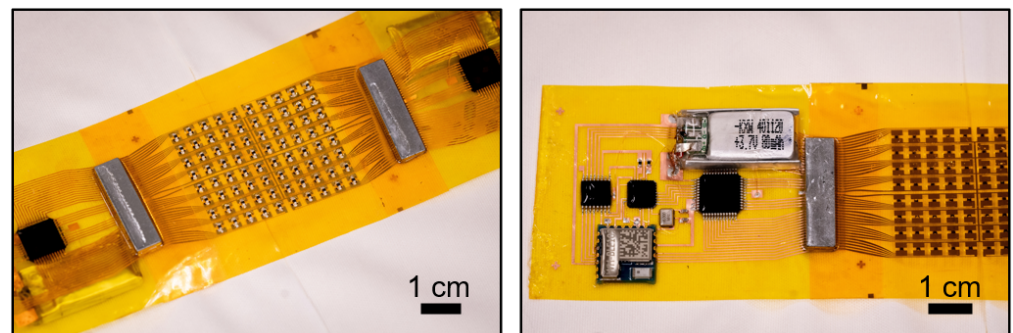
**Figure S3.** The GUI interface of the WH-sensor.



**Figure S4.** Optical images of the WH-sensor attached to the abdomen, back, and calf during operation.



**Figure S5.** (a) Percentage of pixels above 24 °C in Figure 3b. (b) Percentage of pixels above 26 °C in Fig. 3c. (c) Percentage of pixels above 24 °C in Figure. 3d.



**Figure S6.** Optical images of the overall device and its single operating unit.