



# Luminescence Technology Corp.

## Reference Study\_OPD Materials\_LT-S9178 PMDPP3T

### A conformable imager for biometric authentication and vital sign measurement

Tomoyuki Yokota<sup>1\*</sup>, Takashi Nakamura<sup>2</sup>, Hirofumi Kato<sup>3</sup>, Marina Mochizuki<sup>2</sup>, Masahiro Tada<sup>2</sup>, Makoto Uchida<sup>2</sup>, Sunghoon Lee<sup>2</sup>, Mari Koizumi<sup>2</sup>, Wakako Yukita<sup>2</sup>, Akio Takimoto<sup>4</sup> and Takao Someya<sup>1\*</sup>

<sup>1</sup>)Department of Electrical Engineering and Information Systems, School of Engineering, The University of Tokyo, Bunkyo-ku, Tokyo, Japan.

<sup>2</sup>)Japan Display Inc., Mobarashi, Chiba, Japan.

<sup>3</sup>)Japan Display Inc., Ebina-shi, Kanagawa, Japan.

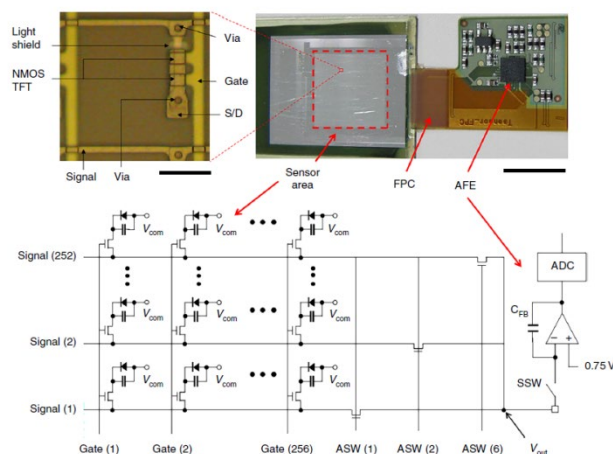
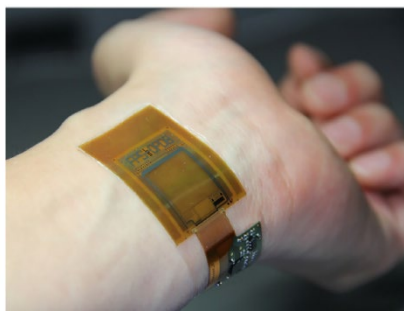
<sup>4</sup>)Japan Display Inc., Minato-ku, Tokyo, Japan.

Reference: Nature Electronics volume 3, pages113–121(2020)

## Abstract

- a combination of polycrystalline silicon thin-film transistor readout circuits and organic photodiodes with high sensitivity in the near-infrared region can be used to create a conformable imager with a resolution of 508 pixels per inch, a speed of 41 frames per second and a total thickness of only 15  $\mu\text{m}$ .
- The imager can read out a photocurrent of less than 10 pA with low noise, and can obtain static biometric signals, including images of fingerprints and veins, via soft contact with the skin. It can also be used to map a pulse wave, electronically selecting the best measurement location by analysing the area distribution.

## Materials & Devices



Materials are used by qualified for testing and research only, there are not guaranteed in patent contention by customer use.

Head office : 2F, No. 21, R&D Road II, Science-Based Industrial Park, Hsin-Chu 30076, Taiwan, R.O.C., TEL : +886-3-666-3188, FAX : +886-3-666-9288.

Taipei office : 9F., No.3, Park St., Nangang Dist., Taipei City 11503, Taiwan, R.O.C., TEL : +886-2-2655-8658, FAX : +886-2-2655-8699.

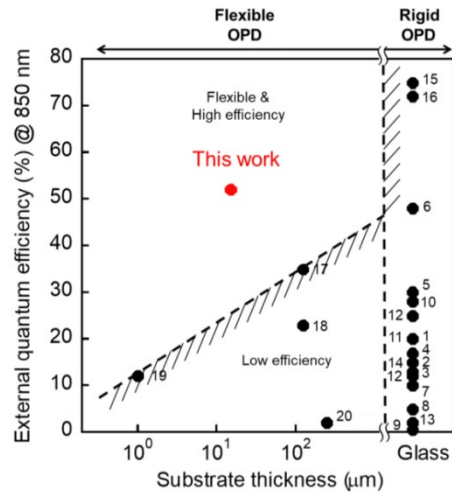
新竹總公司 : 30076 新竹科學工業園區研發二路 21 號 2 樓, TEL : 03-666-3188, FAX : 03-666-9288.

台北分公司 : 11503 台北市南港區國區街 3 號 9 樓 B2, TEL : 02-2655-8658, FAX : 02-2655-8699.

E-mail : [sales@lumtec.biz](mailto:sales@lumtec.biz) ; Web : <http://www.lumtec.com.tw>



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E-mail : [sales@lumtec.biz](mailto:sales@lumtec.biz) ; Web : <http://www.lumtec.com.tw>