Flexible Liquid Crystal Display for Wearable Smart Device

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Flexible displays continue to attract intensive interests due to their potential characteristics. Smart electronic devices such as cell phone and smart watch were produced by flexible OLED and EPD, respectively. However, wearable device made from flexible LCD was rare. In this work, 3.47 inch flexible LCD was successfully made via bond-debond handling method.

Fig. 1 shows the appearance of 3.47 inch flexible LCD, which exhibits 44 mm curvature for fitting human wrist. Thin and light-weight flexible LCD cell are less than 0.3 mm and 2.5g.

AHVA (Advanced Hyper-Viewing Angle) mode was chosen for our flexible LCD due to its remarkable optical properties. Flexible LCD of bending condition is still present a well viewing angle in specific observation distance.

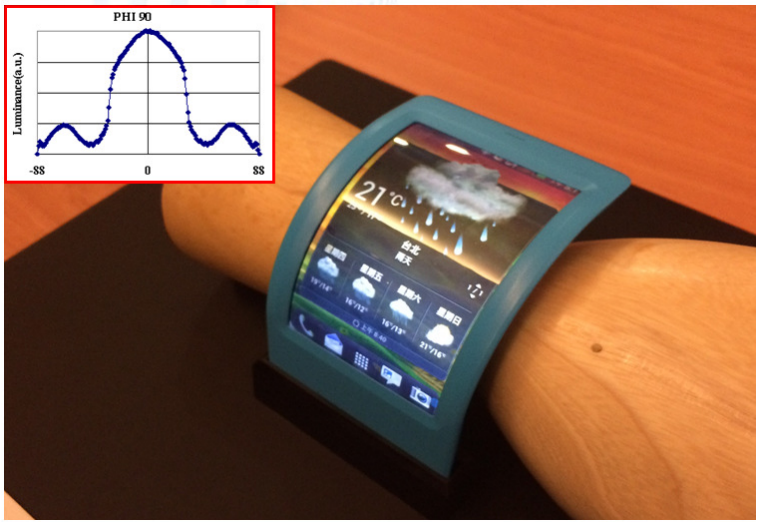

Fig. 1. Demonstration and viewing angle of Flexible LCD

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