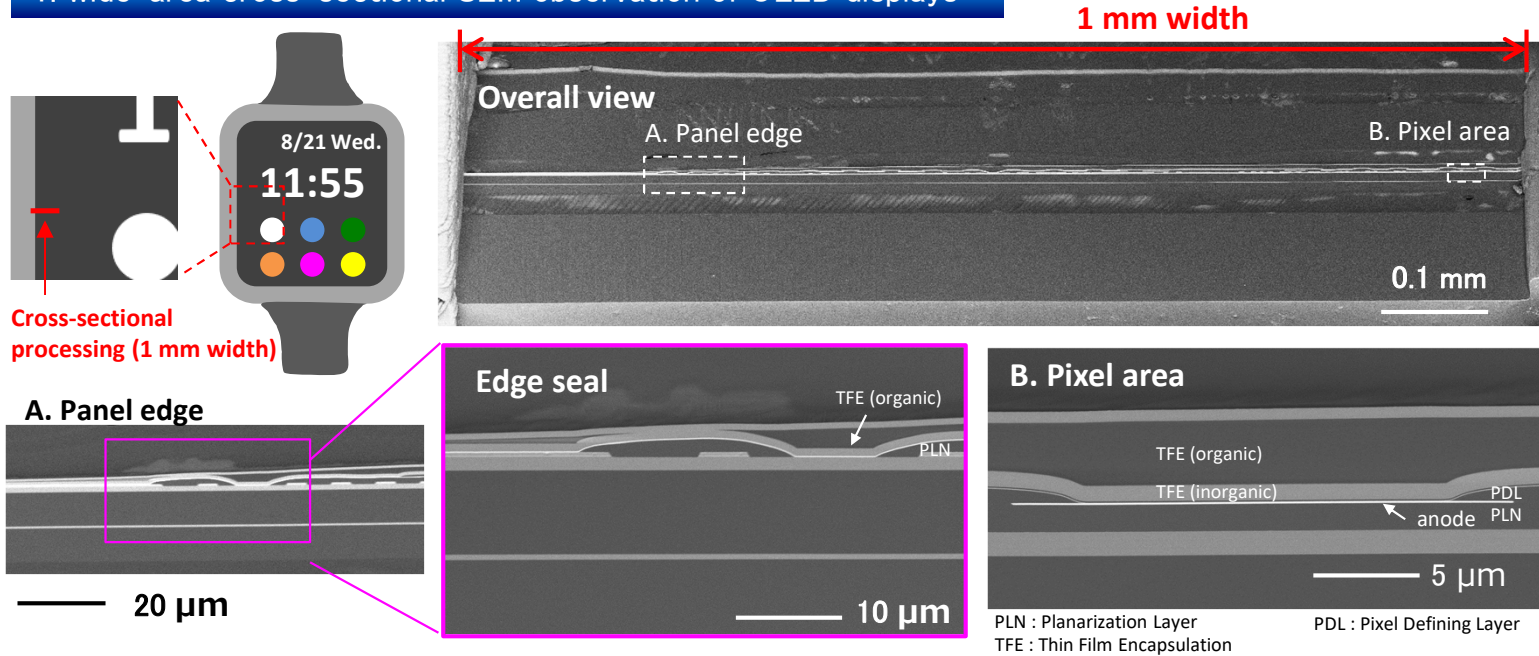


Wide-area SEM observation of OLED display panel using plasma FIB

Focused ion beam by gas plasma ion (PFIB) has an advantage in beam current compared to conventional Ga-ion FIB, so that it enables to get a wider cross-section with the order of several 100 micro-meters. The cross-sectional SEM observation of an OLED display with wide-view gives us a lot of information.

1. wide-area cross-sectional SEM observation of OLED displays

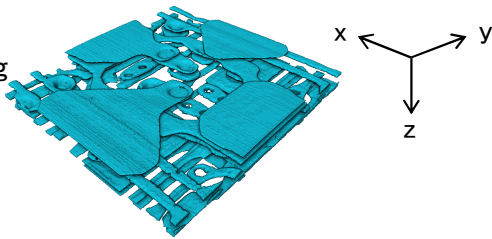


1 mm wide cross section without delamination

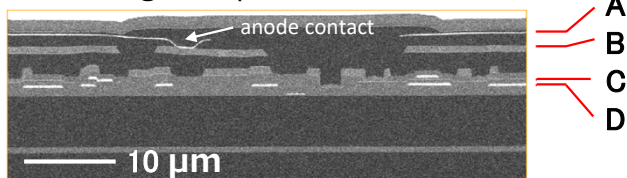
→ continuous and accurate evaluation of the pixel area structure and the end of the encapsulation at the panel edge.

2. Wide-area 3D observation of the OLED display driving circuit (thin-film transistor: TFT)

3D construction
Volume rendering

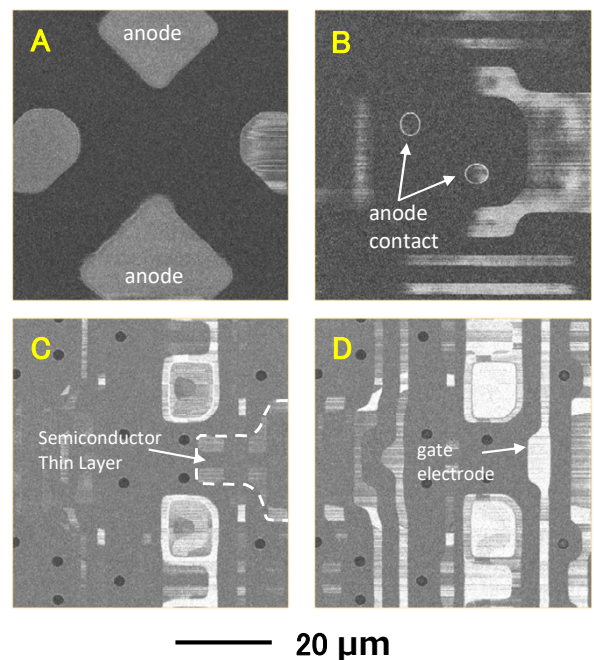


Digital slice image (YZ plane)



Wide-area 3D observation → Understanding of TFT structure (electrode, wiring, contact, and semiconductor thin layer arrangement) can be confirmed.

Digital slice image (XY plane)



Wide-area precise cross-section which cannot be fabricated by polishing or broad ion beam.
→ PFIB-SEM enables accurate structural evaluation of a wide variety of devices.