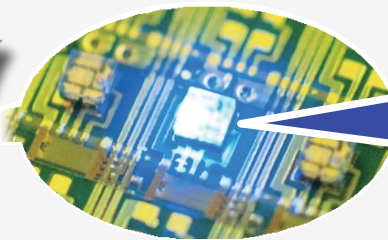
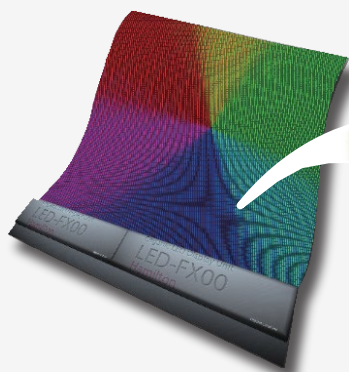


Organic semiconductor flexible display

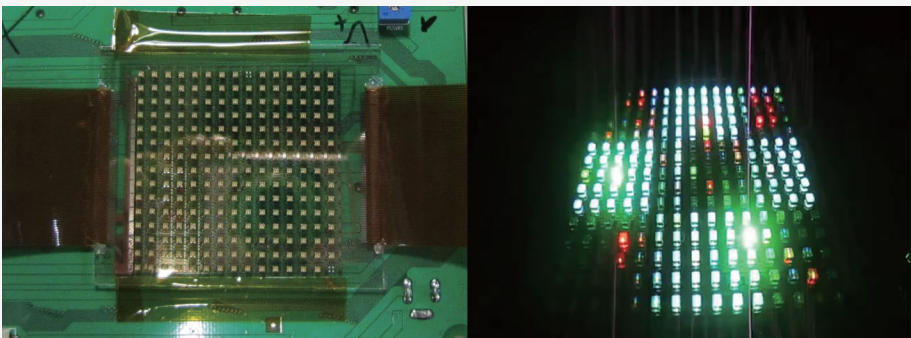
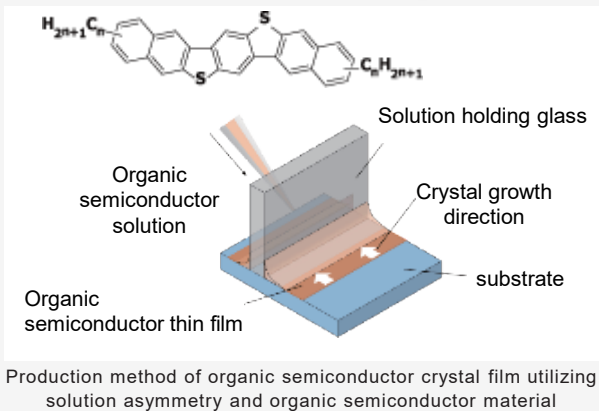
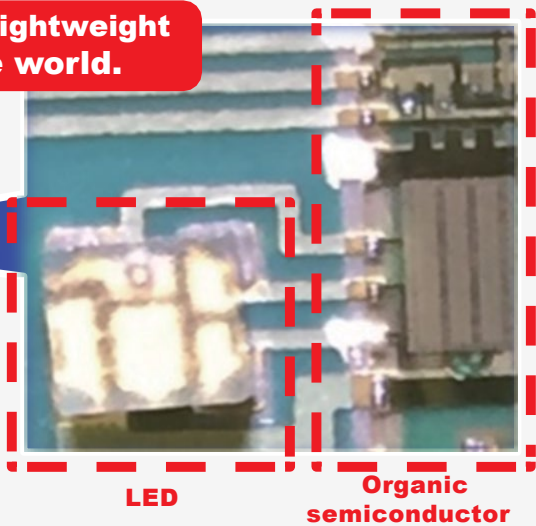
Realization of large sheet display by high mobility organic single crystal TFT by world's first solution coating method and Challenge to the global digital signage market. **Printable electronics**

Organo-Circuit. A method of preparing a large-area semiconductor crystal thin film to be used for a pixel driving circuit (active matrix) of a display by solution coating using an ultra-high performance organic semiconductor having a mobility of about 10 cm² / Vs Has been developed. In addition, we developed a lamination mounting method in which transistor arrays are actually formed using crystalline films of about 10 cm square and individual chips are cut off and bonded to each pixel on the printed circuit board.

By combining these methods, we realized the thinned, lightweight driven LED display like paper for the first time in the world.



Organic active matrix of LED display developed



LED display with active matrix drive with organic semiconductors

Background of research and development

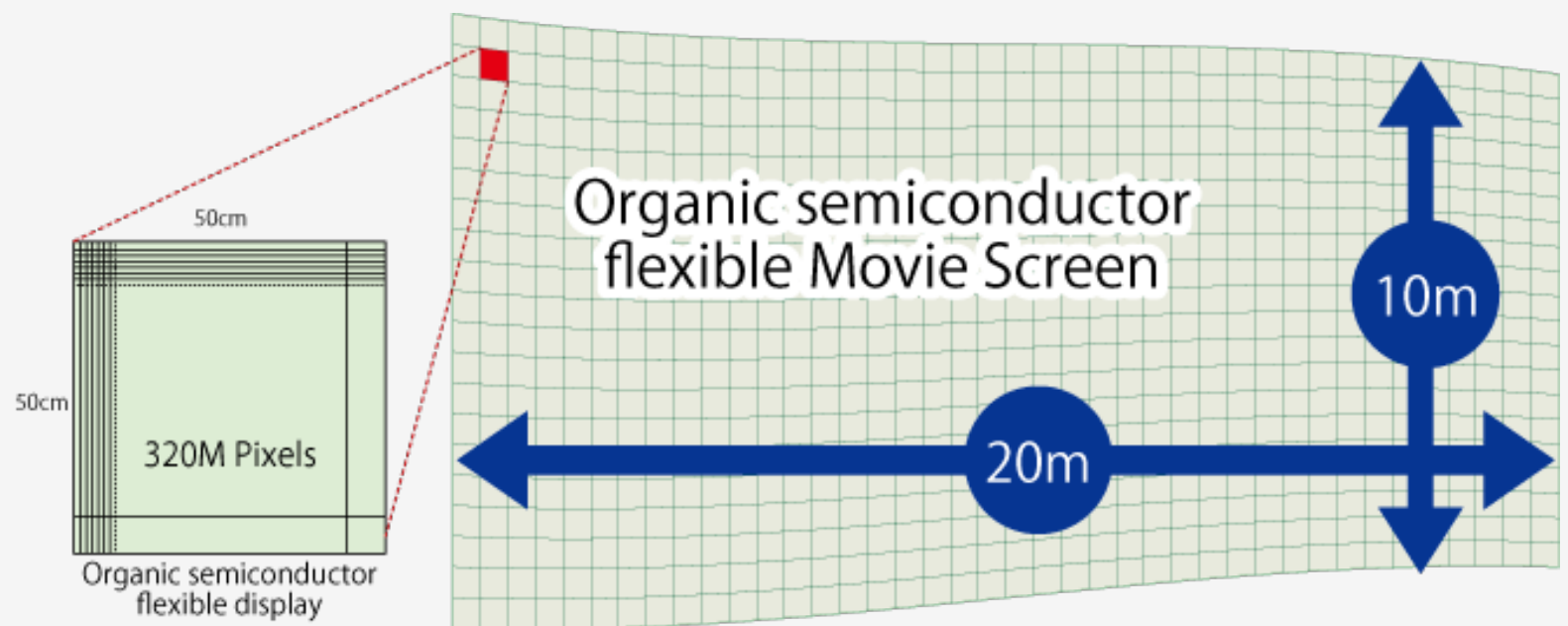
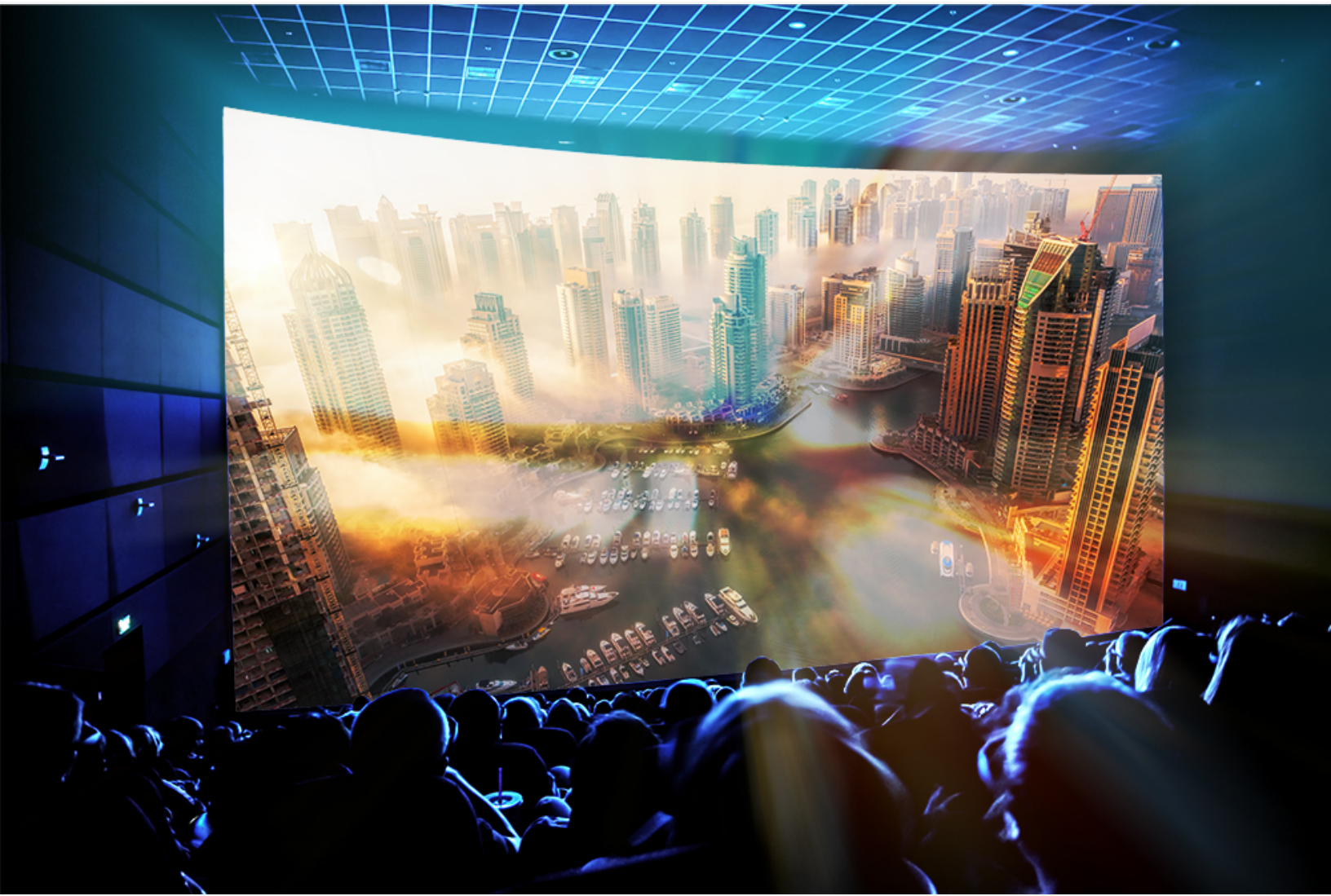
There was no large-sized, lightweight, low-cost signage medium such as an event venue or a public space, and new technology was desired. Organic semiconductors that can be applied with flexible, low-cost printing process 5) have superiority over conventional semiconductors such as manufacturing cost and flexibility of devices, so that large-area flexible displays and large-area flexible displays There was expectation for application to electronics. However, on the other hand, problems such as current density and the performance of semiconductors themselves are not sufficient.

Therefore, as a result of focusing on breakthrough by fundamental technology such as basic material development and process, we have undertaken original research and development, realizing organic active matrix with sufficient performance for LED driving.



In Japan, Asia, the United States, the world's big advertising market, digital signage is beginning to grow rapidly. Also, as a result of the market survey, it is clear that there is a great demand in public spaces such as event venues and transportation facilities. We plan to introduce products after two to three years after conducting test marketing in this market in the future. (Images are images utilized at event venues, public institutions, store interiors, etc.)

Organic semiconductor flexible display



ORGANO-CIRCUIT INC.
Huge Flexible Screen
for Movie Theater

20m x 10m
320,000,000 pixels
5,000 candela
100,000 contrast