

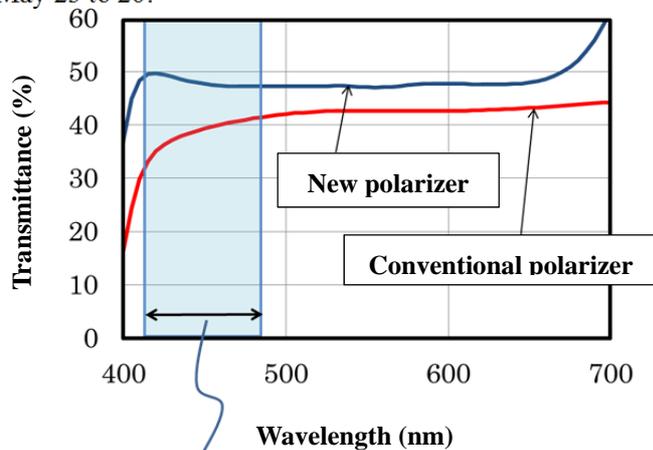
Newly developed blue light high transmission polarizer for Organic EL display

We, Polatechno Co., Ltd. (Joetsu-shi Niigata, President Hiromi Morita), are pleased to announce our success in developing a new dye-type polarizer in which blue light transmission is dramatically improved by using new dichroic dyes and alignment technology. This polarizer will contribute to achieve a further low power consumption and long life Organic EL display which currently has an issue in blue light luminous efficiency.

Organic EL display (OLED) is a light emission type display and has been spread in mobile devices and large-sized televisions with its characteristics as high contrast, wide viewing angle, and thin and light weight because of no back light. Red, green and blue light emission materials are used in OLED in order to realize full colors, however, there still remains an issue in blue light luminous efficiency and most of power is consumed for blue light. OLED also needs to have a polarizer to suppress reflection from the electrode, however, a conventional polarizer, which has poor blue light transmission, further reduces luminous efficiency and prevents from achieving lower power consumption and a longer life.

To solve the issue, we, Polatechno, have successfully developed a new dye-type polarizer in which blue light transmission is dramatically improved (20% higher than conventional one, see figure-1) by using new dichroic dyes and alignment technology. This new polarizer has antireflection performance as well as stability under high temperature or high temperature with high humidity environment because of dye-type polarizer. We are convinced that this new dye-type polarizer will contribute to realize OLED with lower power consumption and a longer life and OLED for high durability application such as automotive displays.

This content will be introduced at an international symposium SID2017 to be held in Los Angeles USA from May 23 to 26.



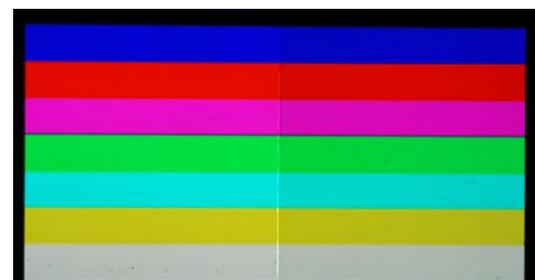
Light emission area of blue light of OLED
(Light emission peak: 450nm)

Figure-1: Spectrum of transmittance of new polarizer



New polarizer Conventional polarizer

Figure-2: Picture taken on blue back light



New polarizer Conventional polarizer

Figure-3: Display when adopted for OLED

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