

**Newly Development of High Contrast High Durability Dye-type Polarizer
by Using Newly Synthesized Dichroic Dyes**

We, Polatechno Co., Ltd. (Joetsu-shi Niigata, President Hiromi Morita), are pleased to announce that we have successfully developed a novel polarizer with both excellent optical characteristics and environmental durability that have not been previously attained, as a result of joint research and development with Nippon Kayaku Co., Ltd. (Chiyoda-ku Tokyo, President Masanobu Suzuki) by using newly synthesized dichroic dyes.

TFT-LCD, have been very popular for many applications such as not only TVs or Smartphones and so on but also Cars or Industrial equipment because of good display performance they can display much information. However, the polarizers used for TFT-LCDs are weak against heat, humidity or UV. There are concerns that the display performance deteriorates in case of these severe environments.

Dye-type polarizers have been adopted for applications requiring resistance to severe environments since before. However, dye-type polarizers are not yet widespread because of less optical performance. Now we have successfully developed the first dye-type polarizer with high optical performance in the world. It realize high contrast (>10000:1) as well as high durability. These excellent characteristics are achieved with newly developed high performance dye and orientation technics. We are convinced that this novel dye-type polarizer is suitable for TFT-LCDs which are used under severe environments such as Cars, outdoor.

This new product will be introduced at an international symposium SID2016 to be held in San Francisco USA from May 22 to May 27.

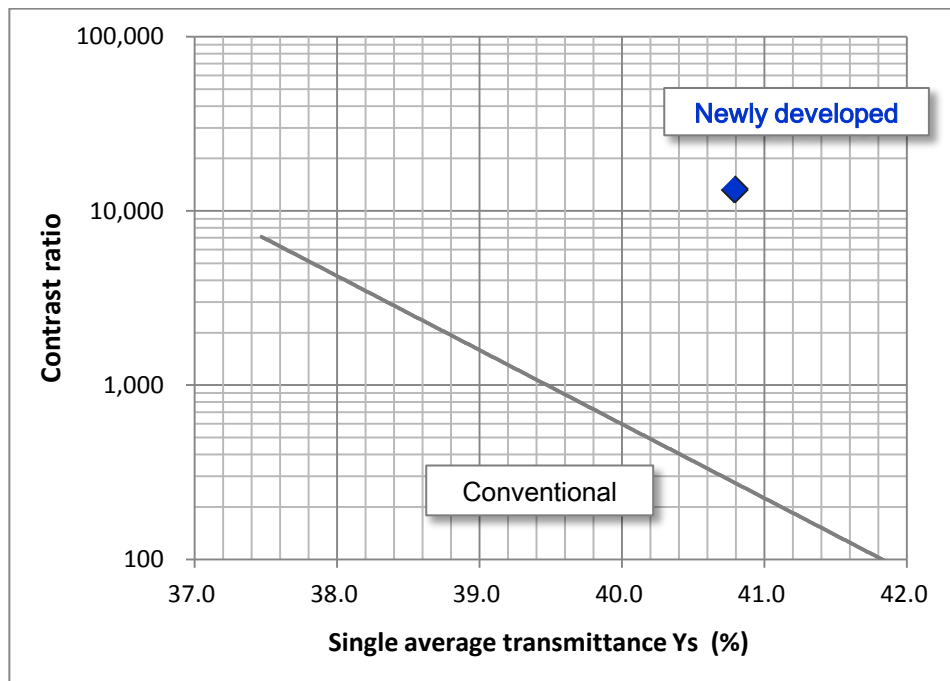


Fig. Relation of contrast ratio and single transmittance for newly developed polarizer compared with our conventional polarizer

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