

New Development of High Contrast Achromatic Polarizer

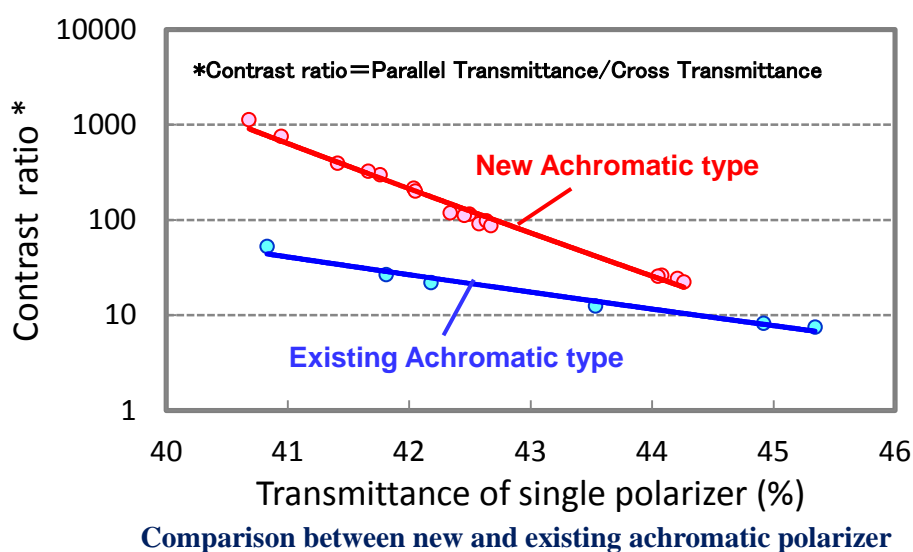
We, Polatechno Co., Ltd. (Joetsu-shi Niigata Japan, President Hiromi Morita), are pleased to announce that we have successfully developed a novel achromatic polarizer with excellent contrast ratio that has been considered hardly to achieve, as a result of joint research and development with Professor Hideo FUJIKAKE and Associate Professor Takahiro ISHINABE from Tohoku University (Sendai-shi Miyagi Japan) and Nippon Kayaku Co., Ltd. (Chiyoda-ku Tokyo Japan, President Masanobu Suzuki) with using newly developed dichroic dyes and orientation technology.

Reflective LCDs have been attracting attention as demand for visibility and durability under the sunlight increases to optical displays while digital signage or wearable products have been prevailing in the world. Reflective LCDs are known as low power consumption, thin, light weight and high visibility even under bright environment such as under the sunlight, since they display images using ambient light instead of backlight.

The reflective LCDs, however, have had problems that white image shows greenish-yellowish white and black image shows bluish black. We, Polatechno, solved the problem in 2014 and successfully launched the world's first dye-type achromatic polarizer, or no coloring polarizer. The achromatic polarizer has been employed for monochromatic reflective LCDs.

Our joint development, this time, succeeded in improving contrast ratio dramatically. The new achromatic polarizer shows more than 10 times better contrast ratio at 41% transmittance compared to our existing one. (See figure below). This improvement is able to have full color reflective LCDs provide high contrast images and high-grade color display. In addition, since dye-type polarizer has superior durability, we are convinced that the new high contrast achromatic polarizer will make great contributions to development of mobile equipment such as smart watches, or full color digital signage for outdoor use.

This new product will be introduced at the 23rd display international workshop IDW/AD '16 to be held in Fukuoka Japan from December 7th to 9th.



For any inquiries about this Release, please contact Corporate Planning Dept. of Polatechno Co., Ltd. (192-6 Aza Shimogawara, Inamasu, Itakura-ku, Joetsu-shi, Niigata-ken 944-0101 Japan)
 TEL: +81-255-78-4700 FAX: +81-255-78-4701