Color Saturation Improvement by the Use of Unequal-Area Color Filters for the RGBW LCD with RGB LED Backlit

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Abstract

The dependences of color gamut size and power consumption on the area ratio of neutral and green sub-pixels for the RGBW LCD with RGB LED backlit are studied, in which the areas of red and blue sub-pixels are the same and are one quarter of pixel aperture area. It is found that high color saturation and power saving can be achieved for the proposed RGBW LCD.

Keyword：LCD, RGBW LCD, Color Saturation