

ABSTRACT

Colour Filter for Liquid Crystal Displays and Film-Forming Apparatus

A colour filter for a liquid crystal display which comprises an optically transparent supporting member (100), a transparent conductive layer (500) formed upon said supporting member (100), and a colour layer (200) in which are disposed in specified patterns red, blue and green picture elements formed upon said transparent conductive layer (500), wherein the colour layer (200) employs pigments as colouring agents which form said picture elements, the relative dielectric constant of the colour layer (200) is at least 2.0 under measurement conditions of the application thereto of an alternating current of 5 V and a frequency of 1 kHz to 100 kHz, and moreover, the red, blue and green picture elements of which the colour layer is composed have relative dielectric constant of within a range of $\pm 25\%$ of the mean value for the relative dielectric constant of said colour layer. The colour layer (200) is 0.4 μm to 1.0 μm thick. The electro-optical properties of the picture elements of the colour filter are almost identical, and the colour filter in spite of adopting electrode lower-mounted structure (COI structure) enables the provision of a liquid crystal display which can provide sufficient effective voltage and good colour adjustment.

Fig.1.



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