Experimental Study of a Drag Coefficient and a Separation Angle for the Laminar Flow Around a Circular Cylinder with Soa

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ABSTRACT

Higher resolution and better color quality are required for Liquid Crystal Display (LCD), therefore, larger amount of pixels and input / output (I / 0) are adopted to be interconnected. Moreover, more advanced skills to package LCD, which drives Integrated Circuit (IC). The technology of The Chip On Glass (COG) packaging process achieves the performance of smaller, thinner, more light - weighted, higher density and higher effect. The purpose of the packaging process of COG are mainly bonding to drive Integrated Circuit (IC) to the ITO electrodes on the glass which substrates with ACF in order to conduct electrically between bump of drive IC and ITO electrodes of the glass panel with the compressed conductive particles. The main purpose of the research paper is observing the mechanical interconnection and the electric interconnection of ACF for COG process. Electrical characteristics of the interconnection using ACF are mainly affected by the degree of deformation and number of Conductive particles. However, the smaller pressure causes not enough contacting area of conductive particle and trace. Moreover, the excessive pressure causes the crushed conductive particles which results in the decrease of the conductive resistance. The ACF interconnect electrically, conductive particle of deformation situation, the elastic contact theory and finite element method are investigated in this paper.

Keywords : Liquid Crystal Display（LCD）, Drive Integrated Circuit （IC）, Anisotropic Conductive Film（ACF）, Chip On Glass （COG）, Indium Tin Oxide （ITO）

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