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Anti-glare Display Design for Computer Animation

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Abstract*:* This paper mainly designs and researches the seven kinds of information module with the highest speed of Ethernet transmission. Their technical essentials and design methods are analyzed and expounded in the aspects of impedance matching, crosstalk elimination and contact zone design. In design process, computer electromagnetic simulation software is chosen and simulation model is built to aid design and verify it. Test instrument is selected according to international standard regulations and information module samples are tested according to test methods to verify the feasibility of design method. In test result, the external crosstalk performance of link can be optimized through the research on the external crosstalk of connector.

Keywords Glare, Animation design, Texture, Picture sense, Display

INTRODUCTION

With the development of science and technology and the improvement of people's living standards, computers have gradually become an indispensable part of people's work and life [Huang, 2017]. However, computers bring convenience to people's work and life, they also bring harm to people's health . The computer screen will produce glare, glare refers to unfavorable brightness in the field of view due to distribution, or in extreme spatial or temporal brightness contrast, the clarity of the screen be affected, especially in the screen is white, When looking at the screen, the eyes will be uncomfortable, there is a small blur phenomenon, resulting in visual discomfort and reduce visibility of the visual conditions. Glare easily lead to eye fatigue, need to be avoided to a great extent. When using a computer for animation design, sometimes the use of the mouse is not sensitive enough, resulting in the details of the work is not perfect, thus reducing the texture and picture sense of the works [Yuan, *et. al.*, 2017].

DESIGN IDEAS AND PROGRAMS

Design plan

In this paper, an anti-glare display screen for computer animation design is designed [Guo, *et. al.*, 2017], which includes a fixed frame, a glass substrate, a thin film transistor, a liquid crystal, a storage capacitor and an electrode layer. A polarizer is arranged in the fixing frame. The colloid layer is arranged below the polarizer. The thin film transistor is connected to the pixel electrode, the storage capacitor is disposed under the pixel electrode, the liquid crystal is fixed on the pixel electrode by adhesion, and the gap particles are free between the protective film and the thin film transistor , An alignment film is disposed above the liquid crystal, and the alignment film is attached on the protection film, a diffusion plate is disposed below the storage capacitor, and the storage capacitor is separated from the diffusion plate by a glass substrate, and the diffusion A prism sheet is arranged below the board, and the prism sheet and the beam splitter are fixedly connected by side light spots. The glass substrate is provided with an electrode layer, and a plurality of electrode units are mounted in the electrode layer. A left side of the electrode layer A conductive layer is arranged on the side of the glass substrate, a shielding layer is arranged on the left end of the glass substrate, a receiving layer is arranged between the shielding layer and the conductive layer, and electrode leads are connected to the upper and lower ends of the electrode layer.

Preferably, the pixel electrode is mounted on the right side of the thin film transistor.

Preferably, the protective film is connected to the glass substrate below.

Preferably, a colloidal layer is disposed above the glass substrate.

Preferably, the electrode lead is connected to a storage capacitor.

Design specific structure

An anti-glare display screen for computer animation design comprising a fixed frame (1), a glass substrate (4), a thin film transistor (7), a liquid crystal (10), a storage capacitor (12) and an electrode layer(19), Wherein a polarizer (2)is mounted in the fixing frame(1) and a colloid layer (3)is arranged below the polarizer(2) and the glass substrate (4)and the protective film(5) are connected with each other, Between the fixed by adhesion, and the protective film (5) is provided with a filter (8), The thin film transistor is connected to the pixel electrode(11) and the storage capacitor(12) is disposed below the pixel electrode(11), the liquid crystal is fixed on the pixel

electrode by adhesion and the gap particles (6)are separated between the protective film(5) and the thin film transistor(7). An alignment film (9)is disposed above the liquid crystal (10)and an alignment film (9) is attached to the protective film (5). A diffusion plate (13)is disposed below the storage capacitor(12), The capacitor(12)and the diffusion plate (13) are separated by the glass substrate (4), A prism sheet(15) is disposed below the diffusion plate (13)and the prism sheet (15) and the spectroscopic sheet (16) are fixedly connected by a side light spot (14). A glass plate (4) is provided on the glass substrate, has an electrode layer (19), and a plurality of electrode units (20) are mounted in the electrode layer (19).A conductive layer (22) is arranged on the left side of the electrode layer (19) and a shield layer (18) is mounted on the left end of the glass substrate. The shielding layer (18) and the conductive layer (22) are mounted There is a receiving layer (21), and electrode leads (17) are connected to the upper and lower ends of the electrode layer (19).

Figure 1 shows the structure of the screen;

Figure 2 is a side view of the touch layer.

In the figure: 1-fixed frame; 2-polarizer; 3-colloid layer; 4-glass substrate; 5- protective film; 6-gap particle; 7-thin film transistor; 8-filter; 9-alignment film; 10-liquid crystal; 11-pixel electrode; 12-storage capacitance; 13-diffuser plate; 14-side light spot; 15-prism sheet; 16-light-splitting sheet; 17-electrode wire; 18-shield layer; 19-electrode layer; 20-electrode unit; 21-receiving layer; 22-conductive layer .

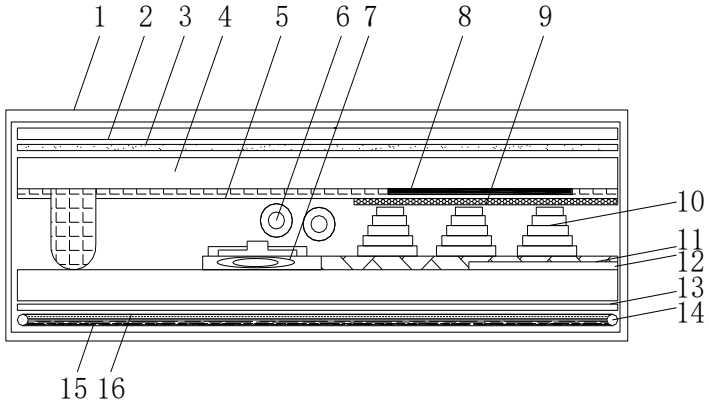

Figure 1 shows the structure of the screen

The anti-glare display screen for computer animation design is characterized in that: the pixel electrode (11) is mounted on the right side of the thin film transistor (7).The protective film (5) is connected to the lower glass substrate (4). A colloidal layer (3) is provided above the glass substrate (4). The electrode lead (17) is connected to the storage capacitor (12).

Working principle

The two glass substrates 4 are provided with an alignment film 9, the liquid crystals 10 are aligned along the grooves, the interstitial particles 6 in the liquid crystal 10 are aligned one by one in the same plane, and the nematic particles of the interstitial particles 6 extend from one liquid level to another liquid level transition will be gradually reversed, the phase arrangement of the two layers of molecules there is a phase difference, under the action of different current electric field, the gap particles 6 will be rotated by 90 degrees to produce the rules, resulting in differences in transparency, so the power on and off Under the action of the light and dark to produce the difference between this principle to control each pixel, you can form the desired image, the bottom of the display are provided as a light source lamp, and the back of the LCD screen has a prism sheet 15 and the beam splitter 16 , can emit light and provide a uniform backlight. When touching the screen body, the contact point forms a coupling capacitor with the screen face to form a small current which flows out from the four corners of the electrode layer 19 and flows through the electrode unit 20 The current is proportional to the linear distance from the contact point to the four corners. The receiving layer 21 calculates the contact point coordinate values by calculating the four current ratios, and realizes the touch control function.

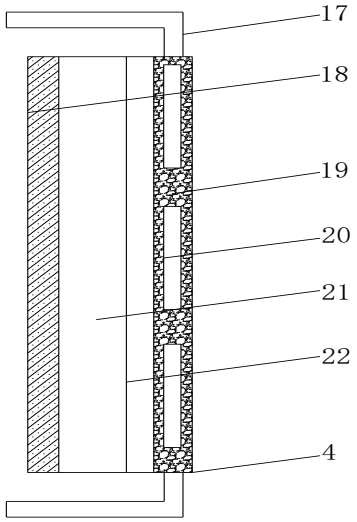

Figure 2 A side view of the touch layer

SUMMARY

The anti-glare display screen by placing a layer of colloid layer, the use of nickel [Guo, *et. al.*, 2016], silver and other metal materials in a vacuum environment so that these metals in high-speed movement of ions, attached to the glass surface without affecting the screen display content to watch.At the same time, the external light diffuse, so as to effectively eliminate the effect of glare in glare conditions to avoid glare, protect the eyes, will not cause damage to human vision, the anti-glare display is also equipped with touch function, the use of during the design of paintings, they are more user-friendly and more refined and detailed in animation and design, improving the quality of their works.

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