★★★＜第１４回知的財産翻訳検定試験【第８回和文英訳】＞★★★

<<１級／電気・電子工学>>

[問１]

(1)1. An apparatus for controlling a light output of an LED luminaire including a single color LED group having at least one LED, the apparatus comprising:

a spectral filter arranged to receive light emitted from the LED group;

a photodetector optically coupled with the filter for detecting light, that has passed through the filter, to generate a detection signal;

a controller module connected with the photodetector for controlling the light output of the LED group at least partially based on the detection signal; and

an incident angle limiting unit for limiting an angle of incidence of the LED light received by the filter.

2. The apparatus according to claim 1, wherein said incident angle limiting unit includes a light-transparent portion aligned with the filter.

3. The apparatus according to claim 1, wherein said controller module causes a lamp attached to the LED group to light upon receiving the detection signal.

(2)1. A method of fabricating a semiconductor device comprising the steps of:

preparing a substrate having a predetermined thickness;

heating the substrate to a first temperature;

forming a stack on the substrate by sequentially stacking a plurality of semiconductor chips, each having through electrodes, heated to a second temperature higher than the first temperature;

providing a reinforcing member on the stack, said reinforcing member being thicker than any of said plurality of semiconductor chips; and

cooling the substrate, the stack and the reinforcing member to room temperature.

2. The method of claim 1 further comprising the step of bonding another substrate on a lower surface of the substrate between said step of preparing and said step of heating, wherein said another substrate has a softening point equal to or higher than 500 degrees C.

[問2]

Conventional image display apparatuses found in the related art include a liquid-crystal panel (liquid-crystal cell array), and a driving unit (a data line driving circuit and a row driving circuit) that drives the liquid-crystal panel with an image signal to form an image in response to the

image signal (see Patent Document 1). The liquid-crystal panel includes a pair of light-transmissive substrates, a pair of alignment layers arranged between the light-transmissive substrates and a liquid-crystal material sealed between the alignment layers. The liquid-crystal panel further includes a pair of polarizers provided on the outer sides of the light-transmissive substrates. One of the light-transmissive substrates serves as a driver substrate (array substrate) driving the liquid crystal material, and includes a plurality of scanning lines, a plurality of data lines (signal lines), switching elements, such as thin film transistors (TFTs), respectively arranged at intersections of the scanning lines and the data lines, and pixel electrodes to which pixel electrode voltages are supplied from the data lines via the switching elements. The other light-transmissive substrate is an opposing substrate having a counter electrode. The counter electrode is supplied with a counter electrode voltage.

[問3]

An embodiment of the present invention is described with reference to the drawings. Elements identical to those described above with reference to the related art are designated with the same reference numerals and a detailed description thereof is omitted herein. Fig. 1 is a block diagram of a contactless integrated circuit (IC) card of the embodiment of the present invention. Fig. 2 is a cross-sectional view of the body of a card 1 placed in an upward position. Fig. 3 is a cross-sectional view of the body of the card 1 placed in a downward position. As illustrated in Fig. 1, the contactless IC card includes an electromagnetic induction antenna coil 2 arranged on one surface of the body of the card 1 having a card-shaped form, an IC chip 6 connected to the electromagnetic induction antenna coil 2 via a circuit wiring line (film-shaped metal wiring line 3), and a switch 7 that opens or closes a circuit of the metal wiring line 3 between the IC chip 6 and the electromagnetic induction antenna coil 2 in response to an on and off control operation by a user. The contactless IC cards are typically categorized into a close coupled type (a communication distance from 0 to 2 mm and an operation frequency of 4.91 MHz), a proximity type (a communication distance from 0 to 10 cm and an operation frequency of 13.56 MHz), and a vicinity type (a communication distance from 0 to 70 cm and an operation frequency of 13.56 MHz). The present invention is applicable to any of these types.