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(54) LCD BACKLIGHT USING TWO-DIMENSIONAL ARRAY LEDS

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ABSTRACT

One embodiment of the invention provides a backlight for an LCD display. The backlight uses a two-dimensional array of single color or white LEDs and a diffusing or phosphor coated cover plate. Various electrical connections of the LEDs and various phosphor color-conversion techniques are described.

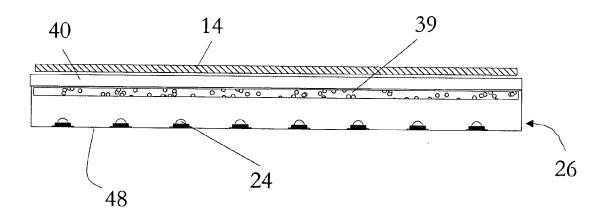


FIG 1A PRIOR ART

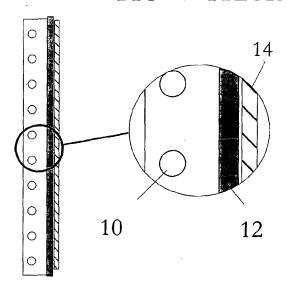
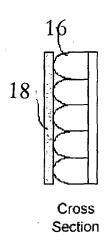


FIG 1B PRIOR ART



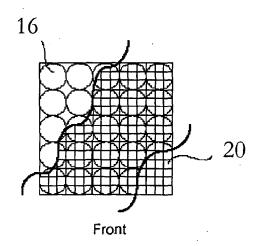


FIG. 2

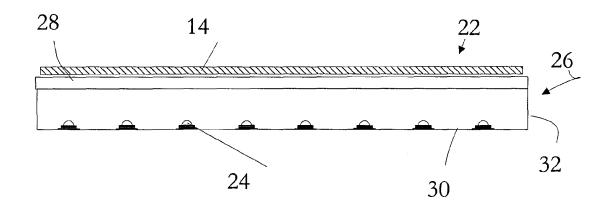


FIG 3A

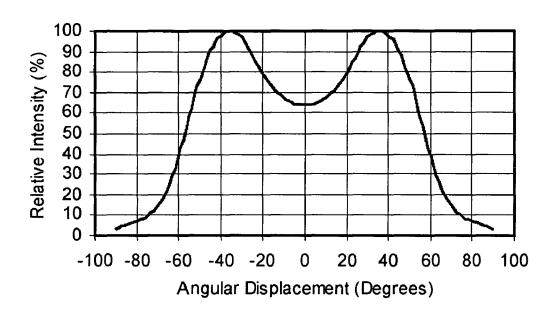
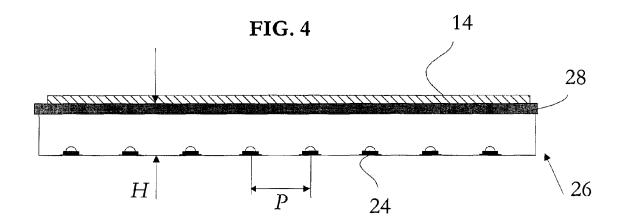


FIG 3B 100 90 80 Relative Intensity (%) 70 60 50 40 30 · · · · Typical Upper Bound 20 Typical Lower Bound 10 -20 -100 -80 -60 -40 0 20 40 60 80 100 Angular Displacment (D gre s)





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