



(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2006/0284574 A1**

Emslie et al.

(43) **Pub. Date: Dec. 21, 2006**

(54) **BACKLIGHTING SYSTEM FOR DISPLAY SCREEN**

Publication Classification

(76) Inventors: **James Stephen Emslie**, Hamilton (NZ);
Richard William Pease, Manukau City (NZ)

(51) **Int. Cl.**
H05B 39/00 (2006.01)
(52) **U.S. Cl.** **315/312**

(57) **ABSTRACT**

A circuit board on which the electronic components providing power to a series of light sources is positioned as near as possible to light sources in order to minimize parasitic energy losses which would be introduced by lengths of wiring. The light sources are usually elongate tubular Cold Cathode Fluorescent Tubes arranged parallel to one another in a single plane and the circuit board may be mounted directly over the light sources, towards one end of the tubes. Standard PCB board-to-board connectors may be provided at an edge of the circuit board and a further circuit board provided with a series of conductive tracks may provide both a mechanical and electrical connection between the circuit board and the light sources. A power distribution method is also disclosed in which both current and temperature of the light sources are monitored and regulated in order to extend the lifetime of the light sources and to stabilize their brightness.

Correspondence Address:
LOWE HAUPTMAN BERNER, LLP
1700 DIAGONAL ROAD
SUITE 300
ALEXANDRIA, VA 22314 (US)

(21) Appl. No.: **11/402,847**

(22) Filed: **Apr. 13, 2006**

Related U.S. Application Data

(62) Division of application No. 10/714,400, filed on Nov. 17, 2003, now Pat. No. 7,095,180.

Foreign Application Priority Data

May 21, 2003 (NZ)..... 526028

