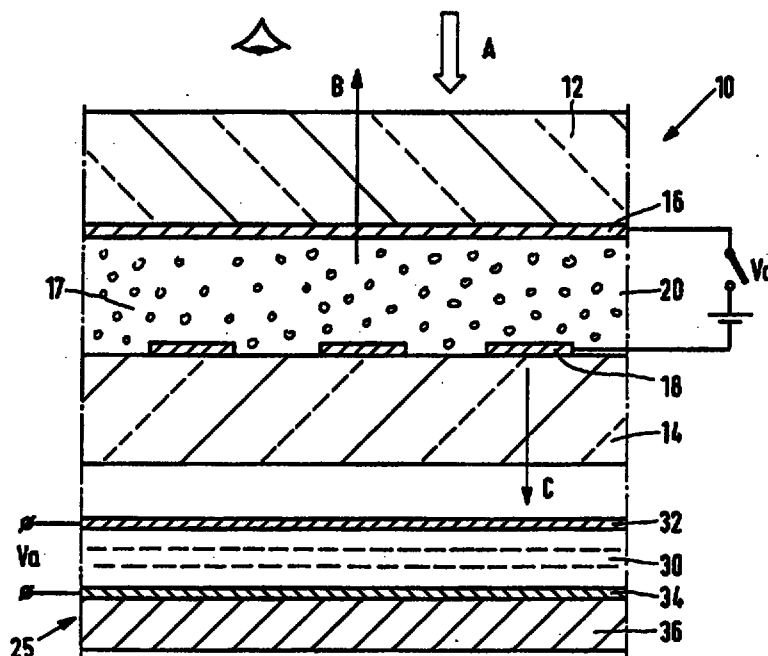




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G02F 1/136, G09F 9/35	A1	(11) International Publication Number: WO 96/18930 (43) International Publication Date: 20 June 1996 (20.06.96)
(21) International Application Number: PCT/IB95/00976 (22) International Filing Date: 8 November 1995 (08.11.95) (30) Priority Data: 9425334.1 15 December 1994 (15.12.94) GB (71) Applicant: PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL). (71) Applicant (for SE only): PHILIPS NORDEN AB [SE/SE]; Kottbygatan 5, Kista, S-164 85 Stockholm (SE). (72) Inventor: BATTERSBY, Stephen, John; 12 Orchid Park, Haywards Heath, West Sussex RH16 3JF (GB). (74) Agent: WILLIAMSON, Paul, Lewis; Internationaal Octrooibureau B.V., P.O. Box 220, NL-5600 AE Eindhoven (NL).		(81) Designated States: JP, KR, SG, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> SG 9611230-5

(54) Title: LIQUID CRYSTAL DISPLAY DEVICE AND APPARATUS INCLUDING SUCH



(57) Abstract

A liquid crystal display device (10) capable of displaying dark characters on a light background, for example a paper white type display, having an LC medium (20), such as PDLC material, switchable between a state in which ambient light incident on one side is back scattered towards a viewer and a state in which incident visible light is transmitted through the medium to a light absorber at the other side so that a viewer perceives a dark display, and in which a photovoltaic structure (25) is used as the light absorber for generating an output voltage in response to the visible light transmitted thereto. In equipment such as a portable computer or the like, the generated power can be utilised to supplement a battery power supply (45).