



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
10.12.2014 Bulletin 2014/50

(51) Int Cl.:
G02F 1/1333 ^(2006.01) **G02F 1/13357** ^(2006.01)

(43) Date of publication A2:
17.09.2014 Bulletin 2014/38

(21) Application number: **14171255.4**

(22) Date of filing: **10.11.2006**

(84) Designated Contracting States:
DE GB NL

(30) Priority: **13.03.2006 KR 20060023068**

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
06077004.7 / 1 835 330

(71) Applicant: **Samsung Electronics Co., Ltd**
Gyeonggi-do 443-742 (KR)

(72) Inventors:

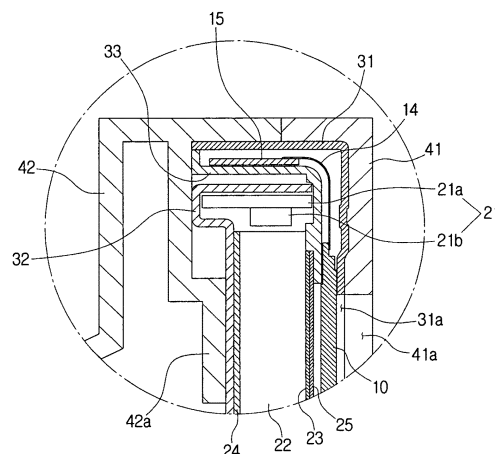
- **Cho, Jin-hyun**
202-104 Seoul (KR)
- **Kang, Joon**
602-27 Seoul (KR)

(74) Representative: **Land, Addick Adrianus Gosling**
Arnold & Siedsma
Bezuidenhoutseweg 57
2594 AC The Hague (NL)

(54) **Liquid crystal display apparatus**

(57) A liquid crystal display apparatus (200) comprising a liquid crystal panel assembly (100) including a liquid crystal panel (10), a backlight module (20) having at least one LED light source (21) arranged to irradiate light to the liquid crystal panel, and a housing (30) which surrounds the liquid crystal panel (10) and the backlight module (20), the housing (30) having a front part (31) which exposes a screen of the liquid crystal panel (10) to the outside and a rear part (32) formed of a thermal conductive material and arranged at a rear side of the backlight module (20); a frame (40) having a front part (41) which is provided with an opening for exposure of the screen of the liquid crystal panel (10), and a rear part (42) mounted at a rear side of the liquid crystal panel assembly (100), wherein the rear part of the housing (42) is arranged to be in contact with the at least one LED light source (21), and the frame (40) is arranged to be in contact with the housing (30), wherein the rear frame part (42) has an electromagnetic wave shield function of effectively intercepting electromagnetic waves generated by the the liquid crystal display apparatus (200).

FIG. 4





EUROPEAN SEARCH REPORT

Application Number
EP 14 17 1255

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	JP 2005 084270 A (SHARP KK) 31 March 2005 (2005-03-31) * paragraph [0013]; figure 8 * * paragraphs [0004], [0006], [0008]; claim 2; figure 1 *	1-11	INV. G02F1/1333 G02F1/13357
A	JP 2002 091330 A (TOSHIBA ELECTRONIC ENG; TOSHIBA CORP) 27 March 2002 (2002-03-27) * paragraph [0019] - paragraph [0033]; figures 1-2 *	1,7-9	
			TECHNICAL FIELDS SEARCHED (IPC)
			G02F G02B H05K F21V
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 27 October 2014	Examiner Frank, Wolfgang
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 14 17 1255

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

27-10-2014

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2005084270 A	31-03-2005	NONE	
JP 2002091330 A	27-03-2002	NONE	

15

20

25

30

35

40

45

50

55

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	液晶显示装置		
公开(公告)号	EP2778774A3	公开(公告)日	2014-12-10
申请号	EP2014171255	申请日	2006-11-10
[标]申请(专利权)人(译)	三星电子株式会社		
申请(专利权)人(译)	三星电子有限公司		
当前申请(专利权)人(译)	三星电子有限公司		
[标]发明人	CHO JIN HYUN KANG JOON		
发明人	CHO, JIN-HYUN KANG, JOON		
IPC分类号	G02F1/1333 G02F1/13357		
CPC分类号	G02F1/133615 G02B6/0073 G02B6/0085 G02F1/133308 G02F2001/133314 G02F2001/133317 G02F2001/133334 G02F2001/133628		
审查员(译)	FRANK , WOLFGANG		
优先权	1020060023068 2006-03-13 KR		
其他公开文献	EP2778774A2		
外部链接	Espacenet		

摘要(译)

一种液晶显示装置 (200)，包括：液晶面板组件 (100)，包括液晶面板 (10)；背光模块 (20)，具有至少一个LED光源 (21)，用于向液晶照射光面板和围绕液晶面板 (10) 和背光模块 (20) 的壳体 (30)，壳体 (30) 具有暴露液晶面板 (10) 的屏幕的前部 (31) 外部和后部 (32) 由导热材料制成并设置在背光模块 (20) 的后侧；框架 (40)，具有前部 (41) 和后部 (42)，前部 (41) 设置用于暴露液晶面板 (10) 的屏幕的开口，后部 (42) 安装在液晶面板组件的后侧 (100)，其中壳体 (42) 的后部布置成与至少一个LED光源 (21) 接触，并且框架 (40) 布置成与壳体 (30) 接触其中后框架部分 (42) 具有有效拦截由液晶显示装置 (200) 产生的电磁波的电磁波屏蔽功能。

FIG. 4

