



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
09.01.2008 Bulletin 2008/02

(51) Int Cl.:
H01L 51/20^(0000.00) H01L 27/00^(2006.01)

(43) Date of publication A2:
14.07.2004 Bulletin 2004/29

(21) Application number: **03079154.5**

(22) Date of filing: **22.12.2003**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR
Designated Extension States:
AL LT LV MK

(72) Inventor: **Cok, Ronald S.,**
c/o Eastman Kodak Company
Rochester,
New York 14650-2201 (US)

(30) Priority: **10.01.2003 US 340489**

(74) Representative: **Haile, Helen Cynthia et al**
Kodak Limited,
Patent Department (W92-3A),
Headstone Drive
Harrow,
Middlesex HA1 4TY (GB)

(71) Applicant: **Eastman Kodak Company**
Rochester, New York 14650 (US)

(54) **Oled displays having improved contrast**

(57) An OLED display device includes a substrate (20); an array of OLED elements disposed over one side of the substrate to emit light in a direction; circuitry (22) to drive the OLED elements located beside the array of

OLED elements on the substrate; a light absorbing material (54) located above the circuitry in the direction of light emission; and a circular polarizer (50) located above the circuitry, the OLED elements, and the light absorbing material in the direction of light emission.

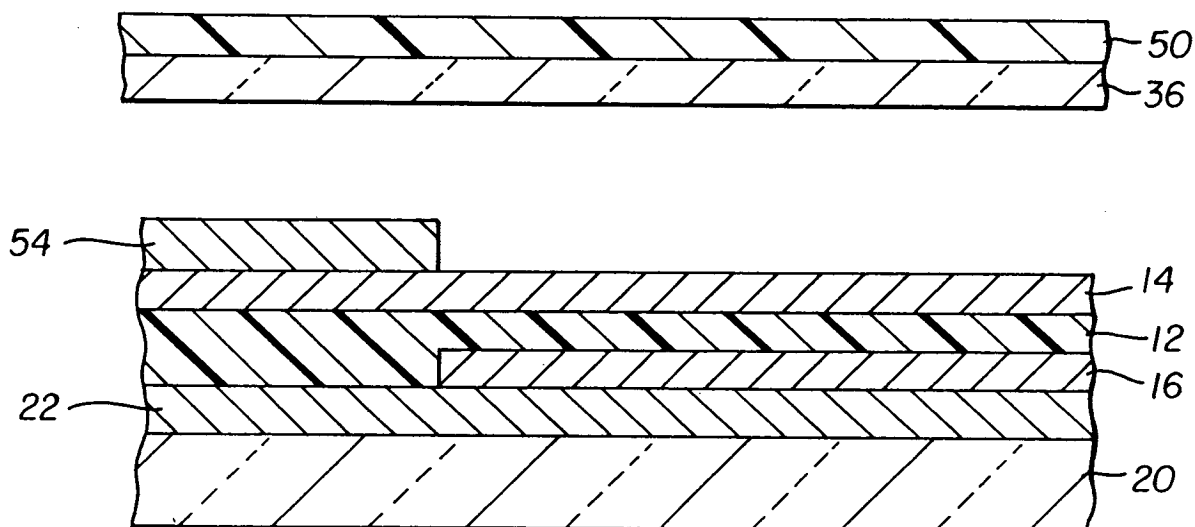


FIG. 3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 03 07 9154

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	EP 1 223 618 A (HITACHI LTD [JP]) 17 July 2002 (2002-07-17)	1-5, 8-10, 13-16, 19-21	INV. H01L51/20 H01L27/00
Y	* paragraphs [0146] - [0152], [0159]; figures 10,11,16 *	6,7,17, 18	
X	US 2002/038998 A1 (FUJITA YOSHIMASA [JP] ET AL) 4 April 2002 (2002-04-04)	1,2,11, 12, 14-16, 19,21	
Y	* paragraphs [0100] - [0114]; figures 8,9 * ----- JP 2000 089215 A (SHARP KK) 31 March 2000 (2000-03-31) * abstract; figure 1 *	6,18	
Y	----- EP 1 085 576 A (SEMICONDUCTOR ENERGY LAB [JP]) 21 March 2001 (2001-03-21) * paragraph [0029] *	7	TECHNICAL FIELDS SEARCHED (IPC)
Y	----- EP 0 895 219 A (SEIKO EPSON CORP [JP]) 3 February 1999 (1999-02-03) * paragraphs [0065], [0066] *	17	H01L
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 20 November 2007	Examiner Faou, Marylène
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			

1
EPO FORM 1503 03.82 (P04C01)

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

EP 03 07 9154

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.

20-11-2007

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1223618	A	17-07-2002	CN 1368656 A	11-09-2002
			CN 1627876 A	15-06-2005
			JP 2002215067 A	31-07-2002
			KR 20020061474 A	24-07-2002
			TW 243928 B	21-11-2005
			US 2002093284 A1	18-07-2002

US 2002038998	A1	04-04-2002	JP 2002108250 A	10-04-2002
			KR 20020025840 A	04-04-2002

JP 2000089215	A	31-03-2000	JP 3558533 B2	25-08-2004

EP 1085576	A	21-03-2001	CN 1289151 A	28-03-2001
			KR 20010067183 A	12-07-2001
			KR 20050096892 A	06-10-2005
			TW 516244 B	01-01-2003
			TW 522453 B	01-03-2003
			US 6445005 B1	03-09-2002

EP 0895219	A	03-02-1999	CN 1506928 A	23-06-2004
			CN 1506929 A	23-06-2004
			CN 1506930 A	23-06-2004
			CN 1217807 A	26-05-1999
			DE 69829084 D1	24-03-2005
			DE 69829084 T2	29-12-2005
			WO 9836407 A1	20-08-1998
			JP 3528182 B2	17-05-2004
			KR 20050056203 A	14-06-2005
			KR 20050104425 A	02-11-2005
			KR 20050103517 A	31-10-2005
			KR 20050103518 A	31-10-2005
			KR 20050103982 A	01-11-2005
			TW 491985 B	21-06-2002
			TW 578130 B	01-03-2004
			US 2002024493 A1	28-02-2002

专利名称(译)	Oled显示器具有改善的对比度		
公开(公告)号	EP1437778A3	公开(公告)日	2008-01-09
申请号	EP2003079154	申请日	2003-12-22
[标]申请(专利权)人(译)	伊斯曼柯达公司		
申请(专利权)人(译)	伊士曼柯达公司		
当前申请(专利权)人(译)	伊士曼柯达公司		
[标]发明人	COK RONALD S C O EASTMAN KODAK COMPANY		
发明人	COK, RONALD S., C/O EASTMAN KODAK COMPANY		
IPC分类号	H01L51/20 H01L27/00 H05B33/22 H01L27/32 H01L51/50 H01L51/52 H05B33/02		
CPC分类号	H01L51/5284 H01L27/322 H01L27/3244 H01L51/5281		
优先权	10/340489 2003-01-10 US		
其他公开文献	EP1437778A2		
外部链接	Espacenet		

摘要(译)

OLED显示装置包括基板(20);OLED元件阵列,设置在基板的一侧上,以沿一个方向发光;电路(22),用于驱动位于基板上的OLED元件阵列旁边的OLED元件;在光发射方向上位于电路上方的光吸收材料(54);圆形偏振器(50)位于电路,OLED元件和光吸收材料上方,在发光方向上。

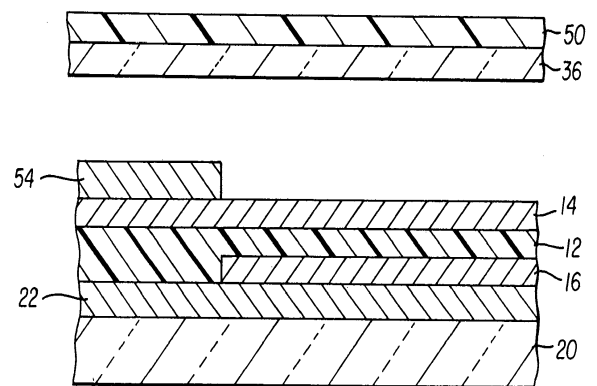


FIG. 3