

TFT가 , EL 가 TFT가 , 가
 TFT TFT TFT가
 TFT TFT EL

1

D , TV LCD가 , LC
 , LCD 가 (electro-luminescence)
 EL)
 EL (, TFT)
 EL , EL TFT , TFT
 (polysilicon) TFT가 TFT TFT
 , 가 TFT TFT가 TFT , 가
 , TFT

TFT TFT TFT TFT TFT ,
 (amorphous) TFT TFT TFT TFT
 , , TFT 가
 , ,
 , 가 ,

가

TFT

TFT U U

(fork)

TFT, TFT,

TFT TFT TFT

TFT

TFT

TFT (bank) 가

TFT TFT

가 가

TFT TFT n

TFT TFT p

EL

2
3
4
5
6
7
8

RGB 3
TFT
TFT

TFT

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

TFT(5) a-Si (7) (10) (outer-edge) 가
 (10) (10)
 TFT(6) a-Si (13) (2) 4

a-Si (7, 13) (31) Al Mo (2) TF
 (patterning) (3) TFT(5, 6) (2)
 (3) (2) (3) (11) TFT(6) (12)
 T(6) a-Si (13) (134) T(6) (134) TFT(6)가
 (134) (21) T(6) (10) TFT(6)가
 (12) T(5) (10) (3) (4) T(6)
 (4) (134) (34) (31) a-Si T(6) T(6)
 (31) (34) (34) (34) T(6)
 (134) (4) (34) T(6)
 (134) (4)

TFT(5) U (8) (8)
 (9) (8) (9)
 (4) (8a) (19)
 (4) EL (1) (14) a-Si (7) EL (1)
 (9a) (14)

TFT(5) (8) (10) , U
 (10) 가 (9) (8) (14)
 가 T(5) 가 a-Si T(6) T(5) 가 T(6)
 가 T(5) a-Si T(6) T(5) 가
 가 T(5) T(5) 가
 가 (8, 9) T(5) 가 T(5) 가 (8) (10)
 9) 가 T(5) (10) 가 가 T(5) T(6)
 5) (2) (3) T(5) T(6)
 (9) (9) (8) U , U T(5) 2

TFT(6) T(6) / T(5) T(5) T(5)
 T(5) T(5) T(5) (2) T(5) (3)
 (11) (3) T(5) T(5) T(5) T(6) T(6)
 (2) (3) T(6) T(6) (12) (11) (11)
 (2) T(6) T(6) (13)

TFT(6) (11) (12) a-Si (13)
 T(5) (9) (8) (8) T(6) T(6)
 3 T(5) T(5) T(5) (8) T(6) (9) T(6)
 T(5) T(5) T(5) T(6) a-Si T(6) 6 T(6)
 6 T(5) 가 T(6) T(5) T(6) T(6)
 T(5) T(5) T(6) T(6) T(5) T(6)
 T(5) T(6) T(5) T(6) T(5) 가

(3) TFT(5, 6) SiNx (32) , (32) ITO()
) IZO((14) (14) (3
) (9a) , TFT(5) (9a) (9a) (14)
 4) (23) (9a) (32) (23) , (1
 (14) (4) TFT(5) (8a)
 (4) (8a) (4) , (4)
 (31) (32) (4) 가 (18a) (8a) TFT(5)
 (8a) (32) (8a) 가 (18b) (19)
 (18a, 18b) (4), (8a)
 , (134) TFT(5) (10) (10) , (21)
 (20a, 20b) (134), (10) (10, 134)
 , 2 RGB 3 4 ,
 30) . 5 TFT(6) (4 A-A) (2)
 (31) SiNx (31) a-Si (13) N a-Si (13a) Al Mo (2)
 . a-Si (13) N a-Si (13a) Al Mo (3)
 (11) , (12) 가 , SiNx (32), SiO₂ ()
 (15), (17), (33)
 , 3 (4) R, G, B (4) 3
 EL (1) (34) (4) 가 (2)
 (4) (34) (34) (34)
 (2) (3)
 4 B-B) (4) (34) 6 ()
 B 4B, G 4G, R (30) 5 (2)
 (34) SiNx (31) 4R , 3
 (4) (31) (31) 5 (11)
 (12) Al Mo (34) 5 (12)
 1) (4) (34) (34a, 34b, 34c)(
 (34) (134) TFT(5) (10)(2) , (34)
 (134) (32) (134) 가 (20a) 2
 (20b) TFT(5) (10) 가 (31) (32)
 21) (20a) , (20a, 20b) ITO IZO ()
 (21) (134) (21b) (15), (17), (33) (10)
 , 7 TFT (4 C-C) TFT(5)
 (10) (30) (10) SiNx (31)
 (31) a-Si (7) N a-Si (7a) Al Mo
 (9) , SiNx U (32) (8)

ge) . 15 SiO₂ , EL (1)가 3 (14) (ed
 (15) (32) (15) (14) (14)
 . 17 (15) (novolac) , (14)
 (17) (32) (17) EL
 (14) (17) (14) (14) TFT(5, 6)
 (4) (17) (14) (17)
 (14) 가 (17)
 가 EL R, G, B (16) 가 ,가
 33 Al Cr (16) (33)
 (33) Al Cr (16) 가
 (30) (14) 가 (16)
 , R, G (4) +8V(Vdd(R), Vdd(G) , B (4) +10V(Vdd(B))
 , (33) -3V TFT(6)가 (2) (3) 가
 TFT(6) (12) TFT(5) (10) TFT(5)가
 , TFT(6)가 (34) TFT(5)
 (4) 가 TFT(5) (14) TFT(5) (14) (33)
) EL 가 (16) 가
 (14) (14)
 (16) (3) TFT(5) 가
 (2) TFT(5) (16)
 (16) TFT(5) 가 (2) TFT(5)
 (3) , TFT(5) (3) TFT(5) a-Si TFT TFT(5) (16)
) ,가 TFT(5) (16) TFT(5)
 , () (16)
 , (2) (3) (3)
 (16), TFT(5), 3 가 (4), TFT(6)
 , (4) TFT(5) , TFT(5) TFT(6) (4)
 , (16) (4) (34)
 (15), (17), 3 5 7 가 (31), (32), (21),
 (14) 가 가 가
 , TFT(6) 가 (16) TFT(
 5) (16) TFT(5) 가 (16)
 TFT (light-induced leakage)가 TFT 가
 가 가

8 (16) 8A TFT
 , 8B , (17)
 8A , (33) (16)
 TFT(5) (16)
 (33)
 TFT(6) , a-Si
 , 가 .

8B (16) TFT(5) (17) (35)
 (16) TFT(6) (36) (33)
 Al Cr (35)
 36) (33) TFT
 , (35, 36) (33)
 , 가 (35, 36)
 (16) 가 TFT (16)
 , TFT 가 TFT TFT .

2 (16) TFT(5) (35)
 (16) TFT(6) (36) (16)
 , , TFT(5) a-Si TFT (14)
 , TFT(5)
) TFT(5) , , TFT(6) (2) (3) (35)
 (36) (36) , (2, 3) (16) (2, 3)
 (36) , TFT(6) (16)
 (36) (16)
 , (16) , , TFT 가 가
 , (35, 36) 가

TFT(5, 6) (17) (33) , , TFT(5, 6)
 (33) , TFT(5, 6) TFT(5, 6)
 (33) , (17) TFT(5, 6) (33)
 , TFT(5, 6) 가 (33) TFT(5, 6) 가
 , TFT(5, 6) (33)
 TFT(5, 6) (17) , TFT(5, 6) (17) , (17)
 (33) , TFT(5, 6) , TFT(5, 6) (17)
 , (35, 36) (17) 가 가 TFT(5, 6) (17)
 , (17)

TFT 가 .
 , TFT

EL TFT a-Si TFT , 가
 TFT 가 , 가
 TFT(5) (9) (9) 가 U
 (8) EL (9) 가 , TFT(5) , (16)
 , 가 , TFT(5) . U
 , 그 , U

(amorphous)

1 2.

가

1 3.

가

3 4.

가

1 5.

1 6.

U

U

1 7.

7 8.

7 9. ,

7 10. ,

1 11. ,

(bank)

가

1 12. ,

가

1 13. ,

가 가

11 14. 13 ,

15. 1 13

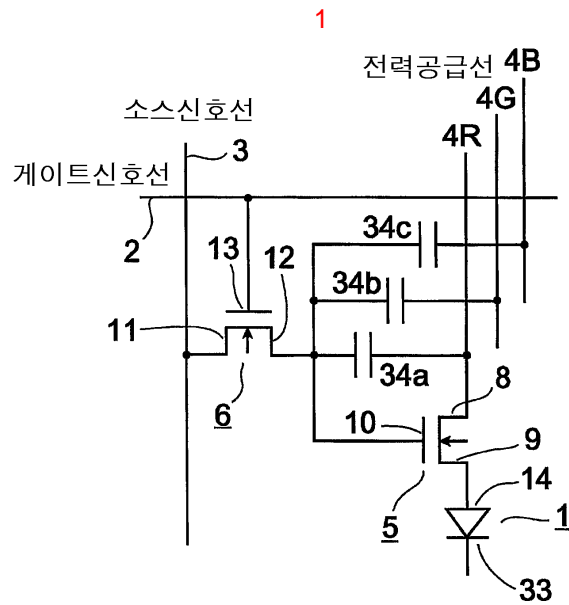
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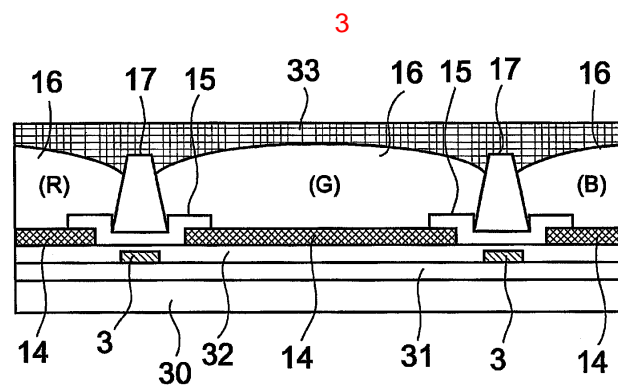
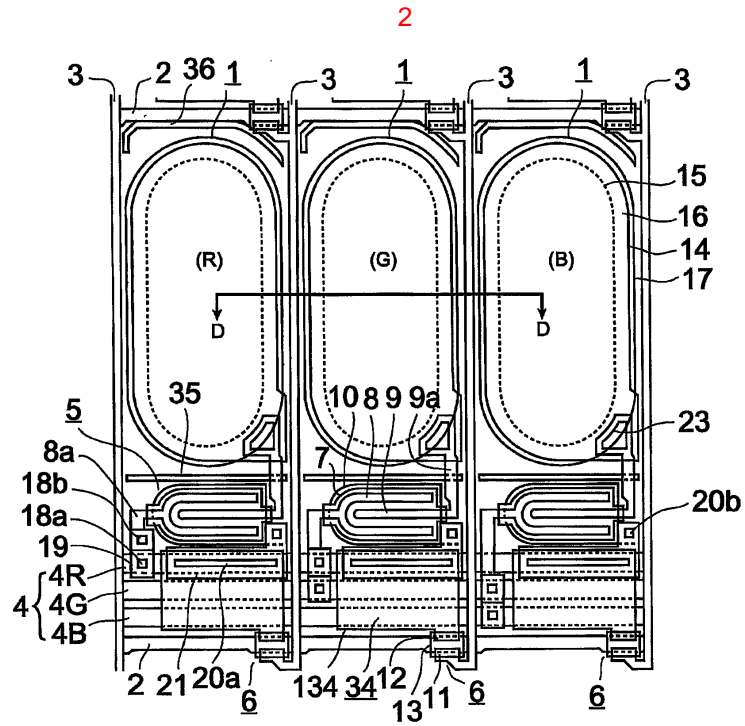
16. 1 13

p

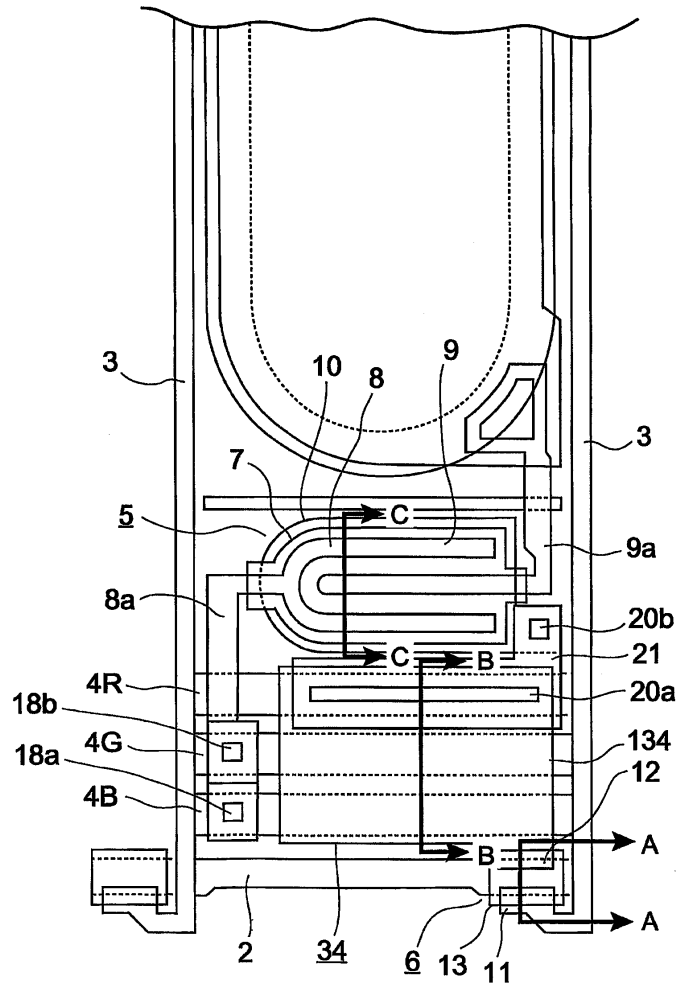
17. 1 13

(electro-luminescence)

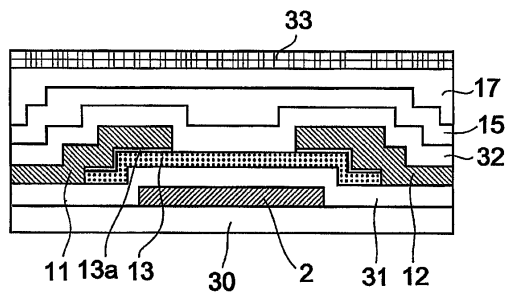




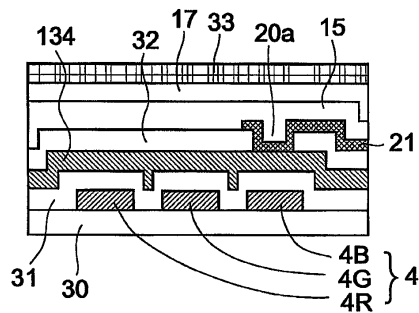
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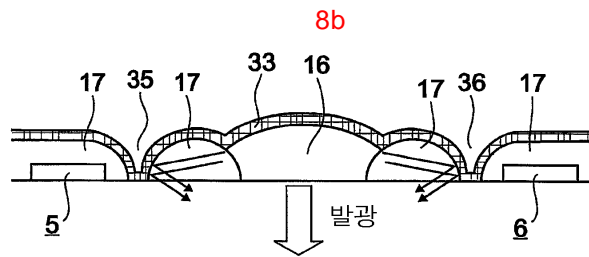
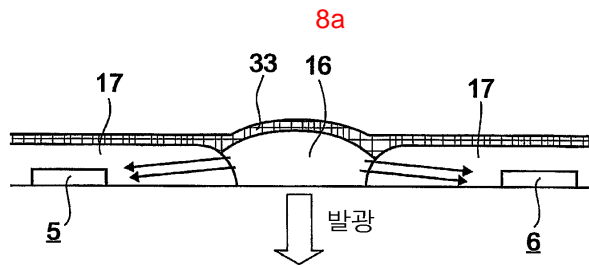
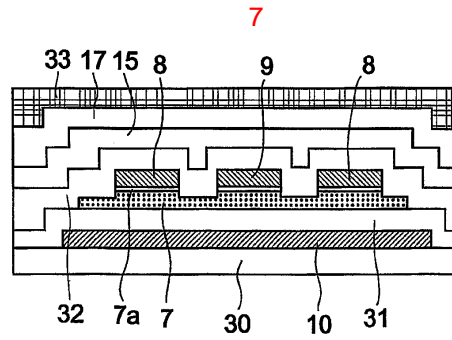


5



6





专利名称(译)	显示设备		
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申请号	KR1020047017285	申请日	2003-04-23
[标]申请(专利权)人(译)	三洋电机株式会社 山洋电气株式会社 三洋电机民用电子株式会社		
申请(专利权)人(译)	三洋电机有限公司是分租 三洋电机株式会社电子锥舒默		
[标]发明人	MORITA SATOSHI 모리타사토시 TANAKA SHINICHIRO 타나카신이치로 KOBAYASHI OSAMU 코바야시오사무		
发明人	모리타사토시 타나카신이치로 코바야시오사무		
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优先权	2002125592 2002-04-26 JP 2002159124 2002-05-31 JP 2002173817 2002-06-14 JP 2002173816 2002-06-14 JP		
其他公开文献	KR100775205B1		
外部链接	Espacenet		

摘要(译)

一种显示装置，包括以矩阵排列的多个发光元件。使扫描信号流入栅极信号线，使数据信号流入源极信号线，使数据信号提供给源极，扫描信号提供给控制器的栅极。当从上方观察时，TFT布置在两条信号线交叉的部分处。因此，当控制TFT导通时，具有连接到漏电极的栅电极的驱动TFT导通，从而电流从电源线经由驱动TFT的源电极和漏电极提供给有机EL元件和有机EL元件发光。在控制TFT和驱动TFT之间存在保持电容。即使当扫描信号变为低电平且控制TFT截止时，驱动TFT的栅极电位也通过保持电容保持预定的一段时间，并且有机EL元件继续发光。

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