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(12)

(KR)  
(B1)

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G02F 1/1335

(45)  
(11)  
(24)

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(21)	10-2000-7001126
(22)	2000 02 01
	2000 02 01
(86)	PCT/JP1999/02916
(86)	1999 06 01

(65)	2001-0022536
(43)	2001 03 15
(87)	WO 1999/63394
(87)	1999 12 09

(81)  $\vdash \neg \exists x (x \neq x) \rightarrow \neg \exists x (x \neq x)$  : , , 가 , ,

EP : , , , , , , , , , ,

(30)	1998-151829	1998 06 02	(JP)
	1998-338566	1998 11 30	(JP)

[illegible]

(72)	604-8551	3	가	가
	604-8551	3	가	가
	604-8551	3	가	가

(74)

• •

(54)

(15) (5) , 0.3~2.0mm (3) (4)  
(14) (6) .

	( (front light-combined touch panel device)	(illumination)
	, PDA(Personal Digital Assistant),	,
ht source)	(back light) PDA,	(lig
visibility)	가, 가	(
表側) ( )가	가 LED	(
	가	
		가 ,
ht guide plate)	1 (unit) 가	(lig
2	1 (resistive model)	가 , 가
3	1	가 , 가
4	1	가 , 60%
200μm		(dot gradation)
5	4	가 ,
6	1	가 ,
7	1	가 ,
8	1	가 , 30~500μm 3

0~100 $\mu$ m

9 , 1

가 (electrode sheet) ,

凹凸

10 , 9 가 ,

凹凸 凹 , 10 가 ,

11 , 10 가 ,

12 , 9 가 (beads)

凹凸 ,

13 , 9 가 ,

凹凸 凸 ,

14 , 13 가 ,

15 , 1 가 (33a) , (

33b) ,

16 , 15 가 88~92 ° ,

17 , 1 180 ° ,

18 , 1 가 ,

0.3~ 2.0mm

1 1 ,

2 1 ,

3 1 ,

4 1 ,

5 2 ,

6 3 ,

7 4 ,

8 5 ,

9 6 ,

10 7 ,

11 8 ,

12 9 ,

13 ,

14 ,

15 10 ,

16 11 ,

17 18 16 2 ,

19 11 ,

1 1 (1A) 2 1 3 1 (1B)

4 1 5 7 2 4 8 12 5 9 15 10 16 19 11 1 12 15 19 1, 1A, 1B , 3 , 4 , 5 , 6 , 7 , 8(8A, 8B, 8C, 8D, 8E) , 9 , 10 , 11, 11A, 11B , 12 , 13 , 14 , 15 ( ) 1 , 1 (6) , (15) ( 5) , 0.3~2.0mm (14) (3) (4) (5) (14) (1), (14) , PDA, , (1), (2) (1) (2 3 ). (1) (1) (1) , (100) (14) 3 (14) (1) , (14) 4 (spacer) (flexible) (11A) , (9) (14) (14) (15) (6) , (14) (5), (3) (4) (15) , (6) (14) 2 ( 4 ). (11A) (9) 가 (11B) ( 5 ). (14) , (1) 4) (rigidity) (11B) (13) , (11A) (14) (15) 3 , 4 (gel) (12) ( 6 ). (12) 가 , (14) (15) (1.0) (1.4~1.7) (12) (3) (11A 11B) (3) , (3) (14) 4 (14) , (9) 가 (11B) (14) (12) (14) ( 7 ). (15) (14) (11B) (13) (15) (3) , 5 (13) (3) , (3) (14) 가 (14) (5) (14) (15) (3) (5) (6) , (5) (3) (14) (出射) , 2 ,

(13) , (3) (12) 가  
 , 7  
 % , 7%  
 (15) (5) (3) 가  
 (3)  
 1 (14) (3)  
 (5) 가 (14) 가  
 (5) 가 0.3~2.0mm (3) 3.0mm  
 (3) 0.3~1.5mm (3) 가 0.3mm (3) 가 2  
 가 .0mm (3) (15) (3) 가 (3)  
 (3) (4) (15) (mirror face) (3)  
 (3) (5) (5) (8) (3)  
 (5) (8) (3) (5) (4) (5)  
 3) (3) 가 (5)  
 (3) (8) 가 , 가  
 (8) ,  
 (8) 가 ,  
 8) 300 $\mu$ m (8) 가 , 가 (15) (7) 가 , (15)  
 5 (3) (5) (3) (3)  
 8A) (3) ( 8 ) 200 $\mu$ m (3)  
 , 60% (5) (3) 가 (3)  
 (5) (3) (5) (8A)  
 6 (5)  
 (3) 가 (3) 가 (3)  
 (8B) ( 9 ) (3)  
 (8B) (5) (8B)  
 (5) (8B)  
 (5) (gravure printing),  
 (3) 가  
 (base sheet)  
 (被轉寫物)  
 7  
 8D) (8D) ( 10 ) (3) (3)  
 (8D) 30 $\mu$ m 가 (mat process) (3) (8D)  
 (3)

(5) . (3) , (3)  
8 (5) (3) (8E) (5) .  
( 11 ). (3) (8E) (8E) , (8E) , 30~500 $\mu$ m, 30~100 $\mu$ m (8  
E) .  
, (8) (3)  
, 9 (3) (8C) (3) , ( 12 ). (3) (3)  
(5) (5) , (3) , ,  
(5) (3) (3) , L  
ED (4)  
, 2 L , 3 U  
4 7 (4) (3)  
(49) (49) , , , (sputtering)  
.  $\text{TiO}_2$ ,  $\text{BaSO}_4$  ,  
(6)  
(15) (14) (12)  
(14) , (13)  
. .  
10 ,  
, 가 . , ( ) ,  
( 103) ( , SID, 95 Digest, page 375, C.Y. Tai, H. Zou, P.K.Tai) .  
凹凸 (108) ( 13 ). (103) (103)  
, (103) , 가凹凸  
(108) (103) , (103) (1  
03)  
, ,  
(109) , (109) (111)  
(111)  
( , 61-131314 ),  
, ,  
, (103)凹凸 (108) (103)  
凹凸 (108)가  
가 ( 14 ). 10  
(3) 15凹凸 (58)  
(14)凹凸 (58)가 (3)  
, (3) (14) (11)  
(43) . (3) (11)  
凹凸 (3) , (14) (11)  
凹凸 , (14) (11)

( 15 ).  
 (5)  
 (58) (11)  
 가  
 (roll)  
 (cavity)  
 (7)  
 (4) (4)  
 (58) (58)  
 가 가  
 가  
 5~40 $\mu$ m  
 (5)  
 가 ( ( 7)  
 5~40 $\mu$ m  
 (58) 가  
 가 가  
 가 (7)  
 5~140 $\mu$ m가  
 (4) (4)  
 (4)  
 (58)  
 (5)  
 11 16  
 (33a) (5)  
 (33b)가 (33)  
 (33) (33) (5)  
 (33a) (33b)  
 (5) (33)  
 17 18 16 (33a)  
 (33b)  
 17 (33a) (33b) ( ) 90° (33b)  
 가 (33)  
 18 (33a) (33b) ( ) 90° 180° (33b)  
 (33b) 가 17 18 (33b)  
 17 18 (33b)  
 (33) (4) (33) 88  
 ~92° (33a) (33b) (5) 180°  
 33a) (33) (33b) 180°  
 (33) , 가  
 90° (33)  $\pm 2^\circ$   
 (33a) (33) 44° (33)  
 가 (33b) (33) 1.44 (33a) (33b)  
 (5)  
 (33a) ( ) 90~180° 가 가 90° (33b)  
 (5) (33) (33a) (33b) 가  
 (4)

11, (5) (33)

(33) (33) (34), (33)

(33) .  $MgF_2$  ( 1.38) ,  $SiO_2$  ( 1.46) (33)

(34) (monomer) (dip coating)

(33) (34) (33)

(34) (33)

19 (33) (5) (34) (34)

(34) (33) (33)

(34) (34)

(34) (3)

가,

[ 1] 凹凸 (matt resin) (clamp) 가 (open) (article) 30 $\mu m$  凹

凸 가 2mm (line) 가,

(pressure sensitive)

ITO(Indium Tin Oxide) ITO

0.2

가 (turn off)

[ 2] 1 ITO 50 $\mu m$

가 가,

, 0.3~2.0mm

가



가

가 .

가

(57)

1.

2.

**3.**

4.

**5.**

**6.**

7.

**8.**

9.

(6) , (5) , (3) (4)

(15) , (14) ,

□□

10.

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, 8

11.

10

12.

9, ,

13.

9 , 9 9 ,

14.

13

15.

[illegible]

16.

15 ,

88~92 °

180

17.

(6) , (5) , (3) (4)  
(15) , (14) ,

(34)

18.









