

(19)
(12)

(KR)
(B1)

(51) 。 Int. Cl. ⁷ C12Q 1/68		(45) (11) (24)	2004 10 08 10-0451663 2004 09 23
(21)	10-2002-0026698	(65)	10-2003-0088773
(22)	2002 05 15	(43)	2003 11 20

(73)

가 161

(72)

5 105

2 206-903

160-1 108-404

110-106

103-1002

126-13302

(74)

:

(54)

TFT-LCD , 가 UV . U

V .

1a TFT-LCD(Thin Film Transistor-Liquid Crystal Display)
 , 1b 1a
 2 TFT-LCD
 3
 4
 5
 6
 7
 < >
 100a: 100b:
 106: 110:
 116: 117:
 118: 119:
 120a, 120b: 124:
 126: 130a, 130b: -

, UV(ultraviolet) DNA
 (cell
)
 가
 (polypeptide), (carbohydrate), (nucleic acid
 가) (DNA, RNA) 가
 3
 (spotting) ,
 (photolithography) ,
 (microelectrode array) 가
 (electronic addressing) .
 (Spotting) (contact printing)
 (non-contacting printing) XYZ , (load
 ing-printing-washing)
 (loading)
 (dispensing) , (ink-jet printin
 g)가 (Dispensing) (micropipette)
 (ink jet printing) (reservoir) 가
 (nano liter) 가
 가
 (Affymetrix)
 5,959,098). (protecting group) (photomask)
 UV 가 OH
 OH 가
 (monomer) 가 ,

가 (micromirror array) (6,271,957).

(Electronic addressing) 가 (electrochemical deposition) 가 (Cosnier, Serge, 'Biomolecule immobilization on electrode surfaces by entrapment or attachment to electrochemically polymerized films. A review' *Biosensors amp; Bioelectronics* 14: pp. 443-456 (1999)). DNA (-) (+) DNA가 (5,605,662). DNA가 (pH (Combimatrix) (oligonucleotide) (6,090,302). LCD(liquid crystal display) (programmable mask) (6,271,957, 2001-0002915). LCD, UV UV 가 LCD LCD 가 LCD 가 LCD LCD 가 LCD UV UV LCD 가 UV UV LCD UV (light shield)(black matrix) UV LCD (photo-conductivity)가 (dark-conductivity) 10^{-6} DNA LCD 가 UV 가 UV LCD LCD LCD LCD UV LCD

[illegible]

가) , IC(integrated circuit) (150) , IC
 (152)가 , (152) FPC(Flexible Printed Circuit) (100) (158)가 4
 (100) (100a) (100a) , (100b) U
 (100a) (100a) (100b) 가 , (100b) U
 (100a) V 가 (100a) (100b) 2-5mm 가 , (100b) U
 (100b) (100a) (100b) 0.1mm-0.6mm가 , (100a) (100b)
 (100b) (156) (154) (100a) (100b)
 (100')
 2 UV
 2
 2 1a
 1b (100a), (100b) (100')
 100') (100') (170) , (100') 가 (176) (176) (176) (176) (176)
 (174) (172) 2 (178) UV (111)
 3 IC
 3 DNA
 3
 UV
 (106) (1
 10)
 TFT-LCD가
 4
 4 2-5mm (100) (102)
 ced Chemical Vapor Deposition) (104) PECVD(Plasma Enhan
 (112) (108) (110) (112) (117)
 ITO(Indium Tin Oxide) (116) 가 (100a)
 (100b) 100-600um (100)
 UV (118) ()
 가 (119) (116)
 (100b) (100a) TFT-LCD (120a)
 (120b) 4 (a) (c) (0) UV (11
 1) (122) 90 ° (111a) (112) UV (122) 90 ° (117)
 가 (120a) (120b) 10-20um UV
 1 (120a, 120b) 330 400nm UV
 polyvinyl alcohol; PVA) (calcite), (quartz),
 (tourmaline), (sodium nitrate), (rutile) TiO₂ (New
 port) () 20LP-UV
 (Glan-Thompson calcite) (10GT04)
 (116) 330 400nm UV 가 , UV
 (116) UV
 (ion beam) DLC(diamond-like-car

bon)
5 4 2 (120b) (depolarizer)(124)
5 (124) (111a) (111)
(2 '176')
6
6 6 4
(120a 120b) (120a)
(Guest-Host) (130a, 130b) (4 12
2)
(130a, 130b) 가 UV (111) (dichroic) (dye)(
130b) 가 (130a, 130b) (6 (b)),
120a) (130b) UV (111) 가
(130b) UV (111) (130a, 130b) 가 (6 (a), (c)), (120a)
UV (111) 가 UV (111a)
UV (111) (111)
UV UV 가
UV UV UV
(Fabry-Parot) 가
(dielectric mirror)
, $\text{ndcos} = m / 2$ ($n =$, $d =$) n
d , n . n
(Wavelength Division Multiplexin
g)
7
7 7
(126) 4, 5 6 가 (100a) U
(112) (126)가 (126) (117) (116) UV
V (100b) 가 (126) (119) (116)
(126)가 (126) (126) (116)
(126) (5 '124')
polarizer) UV DNA LCD (de
(stopping) 가
UV UV 가,
UV LCD 가 DNA
가 DNA
, 가 DNA 가

(57)

1.

2.

가

,

UV

,

,

,

;

,

가

;

,

,

(nematic)

가

가

가

-

3.

가

,

,

UV

;

UV

,

가

,

UV

;

,

가

;

,

,

-

UV

4.

3

,

(nematic)

가

가

가

-

5.

2

,

330

400nm

UV

가

,

UV

6.

5

,

,

(calcite),

(quart

z)

(tourmaline)

7.

2

3

,

UV

8.

2

3

,

330

400nm

UV

가

,

UV

9.

8

,

UV

UV

,

DLC(diamon

d-like-carbon)

10.

2

3

;

,

;

UV

UV

11.

10

12.

10

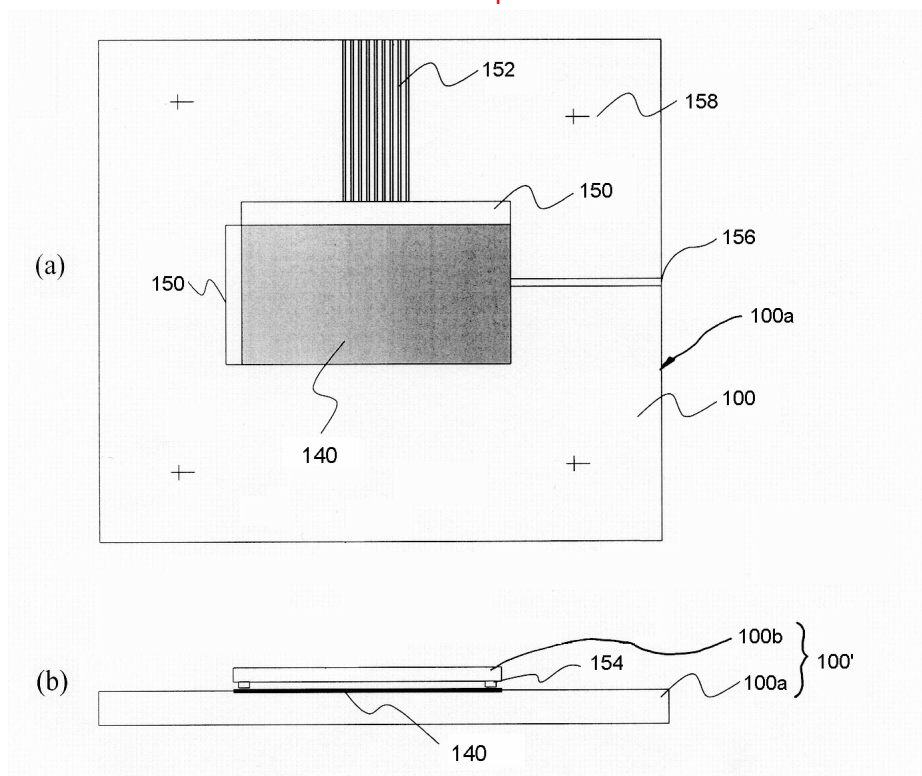
(nematic)

가 가

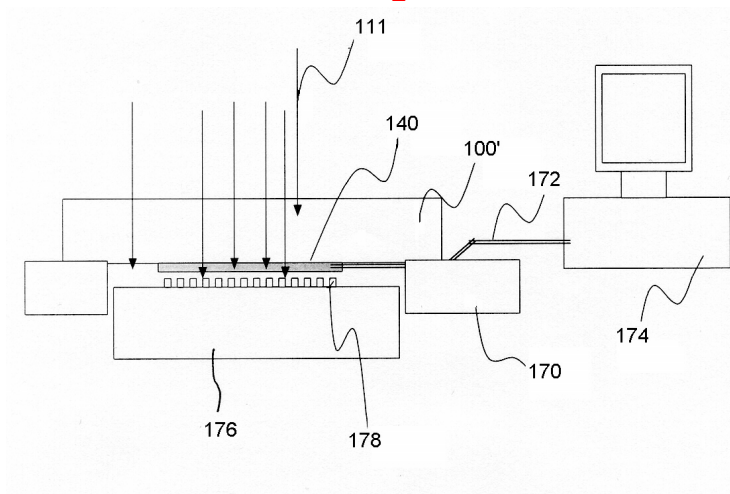
가

가

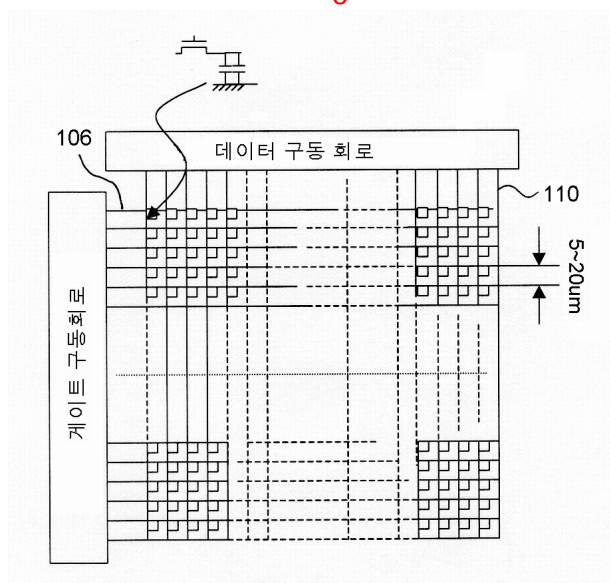
1



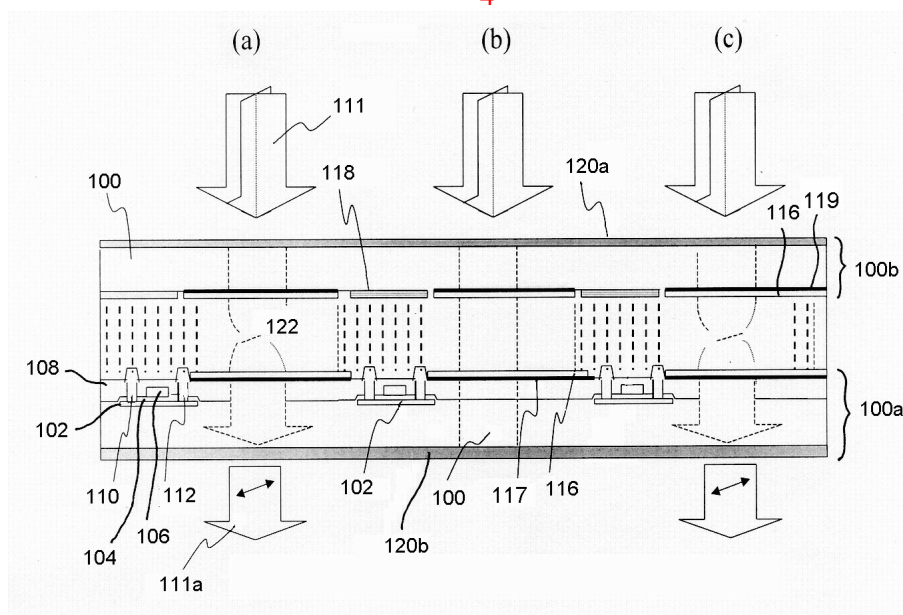
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3



4





7

