

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl. ⁷
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(11)
(43)

2002 - 0027775
2002 04 15

(21) 10 - 2000 - 0058416
(22) 2000 10 05

(71) 53 102 1103

(72) 53 102 1103

:

(54)

(P)
가

1

, , , (P) ,

1

(a) (1) (2) (3)

(b) (1) (2) (4)

2 (1) (5).

3 (2)

4 (5) : (a)

, (b)

*

1 : 2 :

3 : 4 :

5 :

(Excimer Laser Annealing : ELA)

(Solid Phase Crystallization : SPC)

600°C

(~20)

가 가

가

(grain)

(defect)

(Ge)

(microwave)

가

가

< 111 >

(S. Y. Yoon et al., J. Appl. P

(C. Hayzelden et al., Appl. Ph

가

(J. Jan

hys. 82, 5865 (1997)),
ys. Lett. 60, 225 (1992)).

g et al., Nature, Vol. 395, pp. 481 - 483 (1998)).

가

n rate), (incubation time), (nucleatio
 3가 (grain growth rate) . (M. Moniwa et al.,
 Jpn. J. Appl. Phys. 32, 312 (1993)). (grain) 가

가
 가

가 (1) (2) (3)
 1
 10^{10} cm^{-2} $1 \times 10^{11} \sim 10^{13} \text{ cm}^{-2}$ (2) (3) 1(a) 10×10^{11}
 $10^{12} \sim 10^{14} \text{ cm}^{-2}$ (1) $1 \times 10^{11} \sim 10^{13} \text{ cm}^{-2}$ (2) 1(b) 5×10^{12}
 $10^{13} \sim 10^{14} \text{ cm}^{-2}$ (4)
 2 (1) (5) 1.57×10^{13}
 $10^{12} \sim 10^{14} \text{ cm}^{-2}$ (2) (3) $1.9 \times 10^{14} \text{ cm}^{-2}$ 500°C 50 V/cm
 가 30 (2) (2) (5)
 3 P (2)
 (electrical conductivity activation energy : E_a) (2) 0.856 eV
 $6.27 \times 10^{13} \text{ cm}^{-2}$ 0.657 eV , $8.12 \times 10^{13} \text{ cm}^{-2}$ 0.458 eV , 8.
 $5.3 \times 10^{13} \text{ cm}^{-2}$ 0.407 eV 가 (2)

4 ((a) , (b)) (5)
 N₂ 520°C, 3 (2) (3) 3.09x10¹³ cm⁻² (5)
 (5) 4(a) (2)
 7.95x10¹³ /cm² (2) (5) ~18mm 4(b)
 (P) (5) (quality) (5) (2)

가
 (TFT - LCD),

가
 가

(57)

1.

(P) 1x10¹¹ ~ 10¹³ cm⁻² ,
 5x10¹² ~ 10¹⁴ cm⁻² ,

가

2.

1 ,

3.

1 ,

4.

1 ,

5.

1 ,

6.

1 ,

(P)

7.

1 ,

가

2 가

8.

1 ,

9.

1 ,

가

10.

1 ,

가

11.

1 ,

가

12.

11 ,

가 .

13.

11 ,

가 0 V/cm ~ 500 V/cm .

14.

$5 \times 10^{12} \sim 10^{14} \text{ cm}^{-2}$,

가 .

15.

14 ,

(P) 가 $10^{11} \sim 10^{13} \text{ cm}^{-2}$.

16.

14 ,

17.

14 ,

18.

14 ,

19.

14 ,

20.

14 ,

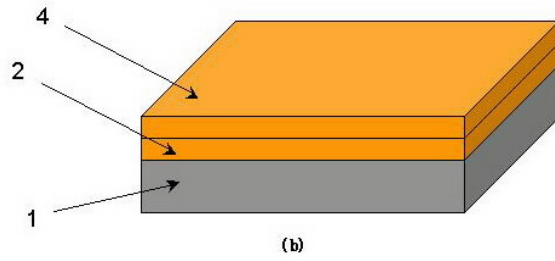
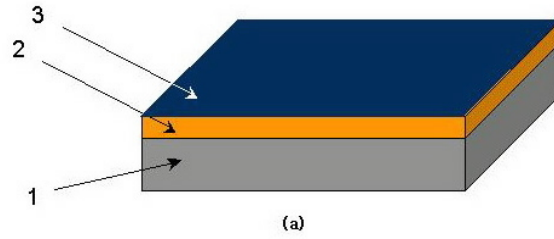
21.

14 ,

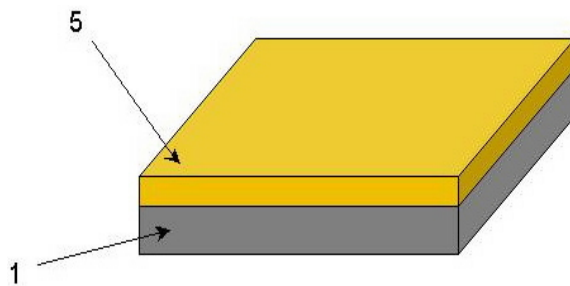
가

가 0 V/cm ~ 500 V/cm

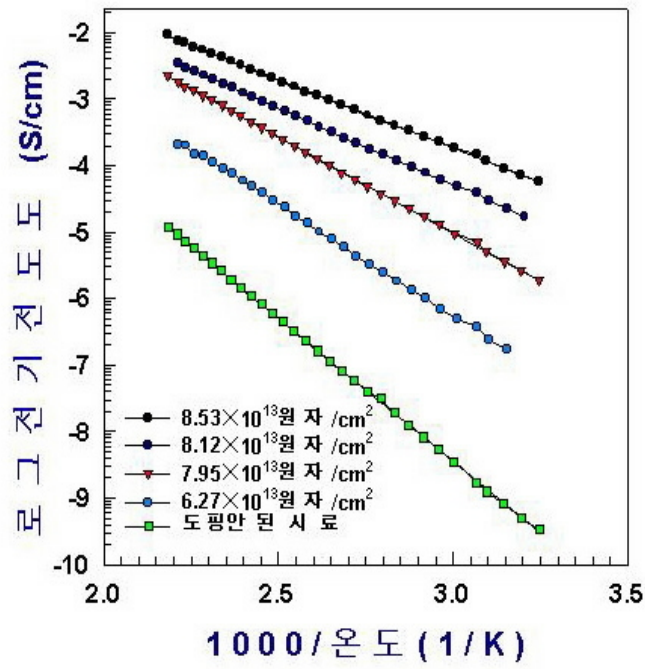
1



2



3



4

