Fig. 1

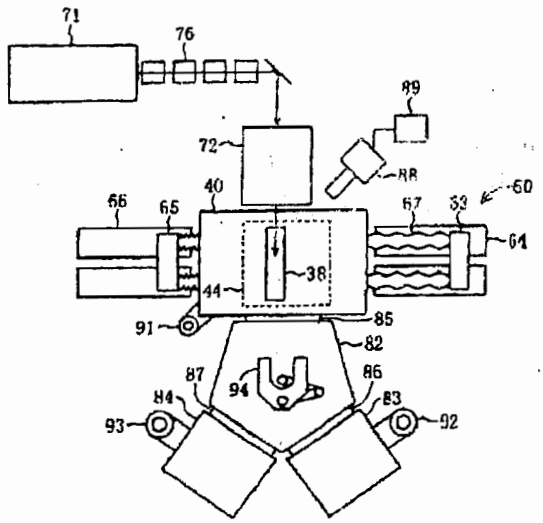

71
76
99
72
RR
40
60
66
65
67
33
64
38
44
91
85
82
87
94
86
84
83
93
92

Fig. 2

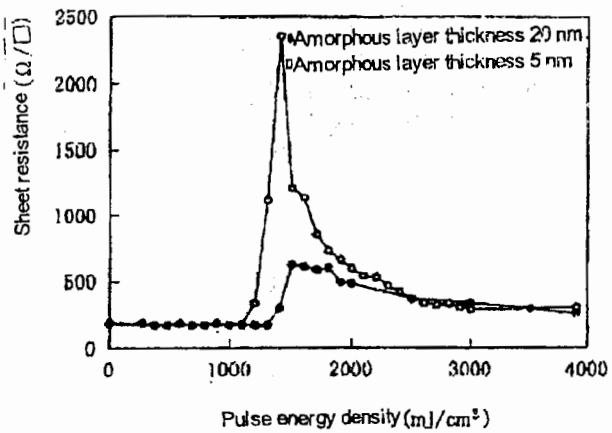

Amorphous layer thickness 20 nm
Amorphous layer thickness 5 nm
Sheet resistance (Ω/□)
2500
2000
1500
1000
500
0
0
1000
2000
3000
4000
Pulse energy density (mJ/cm²)

Fig. 3

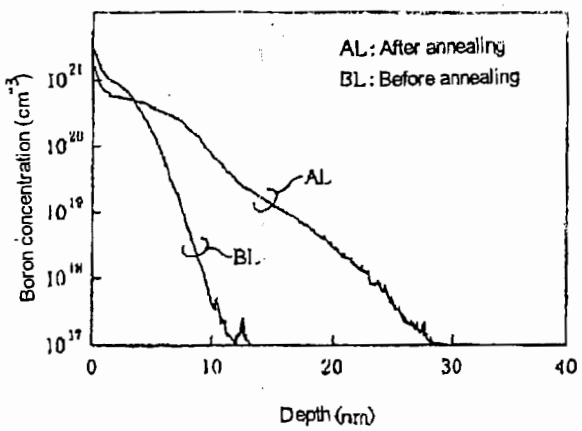

AL: After annealing
BL: Before annealing
AL
BL
Boron concentration (cm⁻³)
Depth (nm)
0
10
20
30
40

Fig. 4

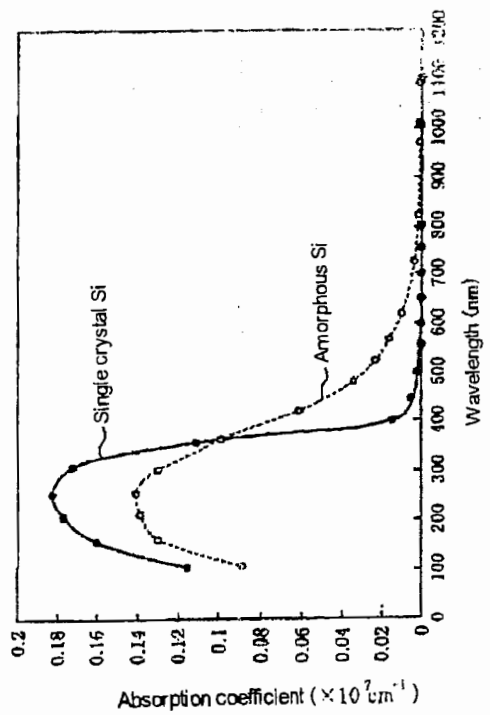

Single crystal Si
Amorphous Si
Wavelength (nm)
Absorption coefficient

Fig. 5

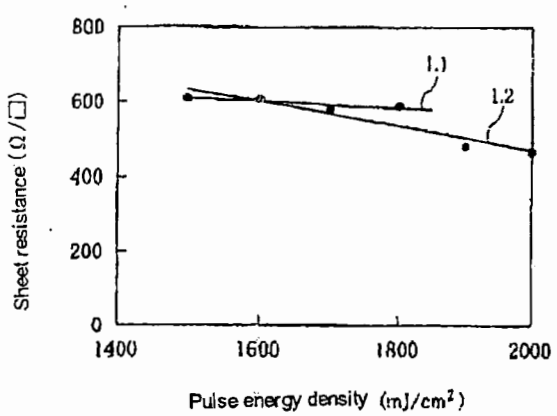

800
600
400
200
0
1400
1600
1800
2000
Sheet resistance (Ω/□)
Pulse energy density (mJ/cm²)
1.1
1.2

Fig. 6

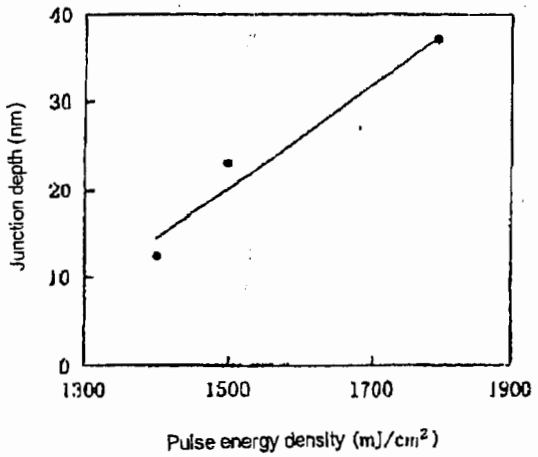

40
30
20
10
0
1300
1500
1700
1900
Junction depth (nm)
Pulse energy density (mJ/cm²)

Fig. 7

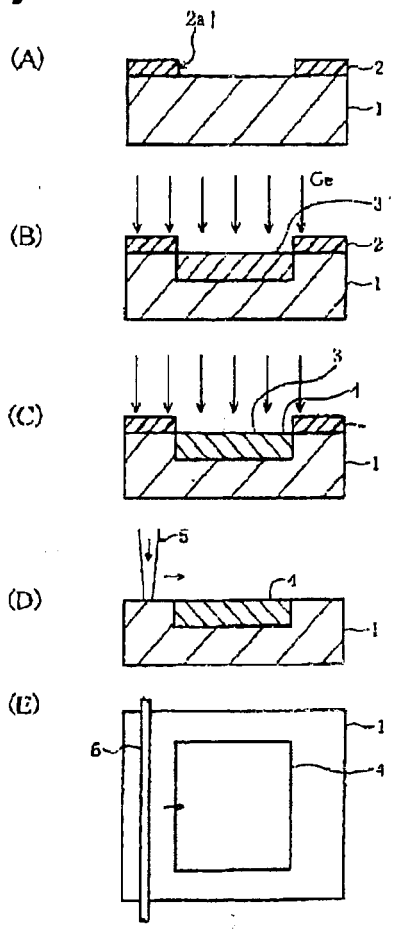

(A)
2a
2
1
(B)
Ge
3
2
1
(C)
3
1
1
(D)
5
4
1
(E)
1
6
4

Fig. 8

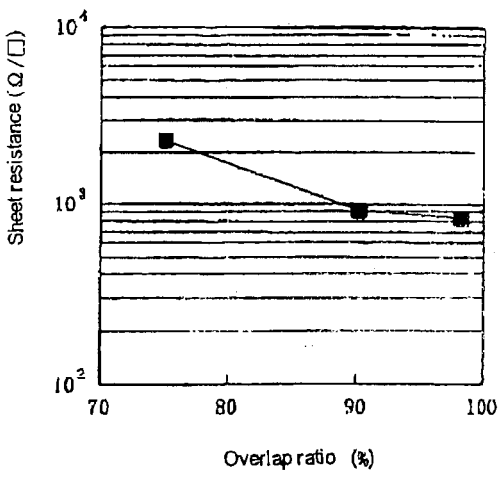

Sheet resistance (Ω/□)
10^4
10^3
10^2
70
80
90
100
Overlap ratio (%)

Fig. 9

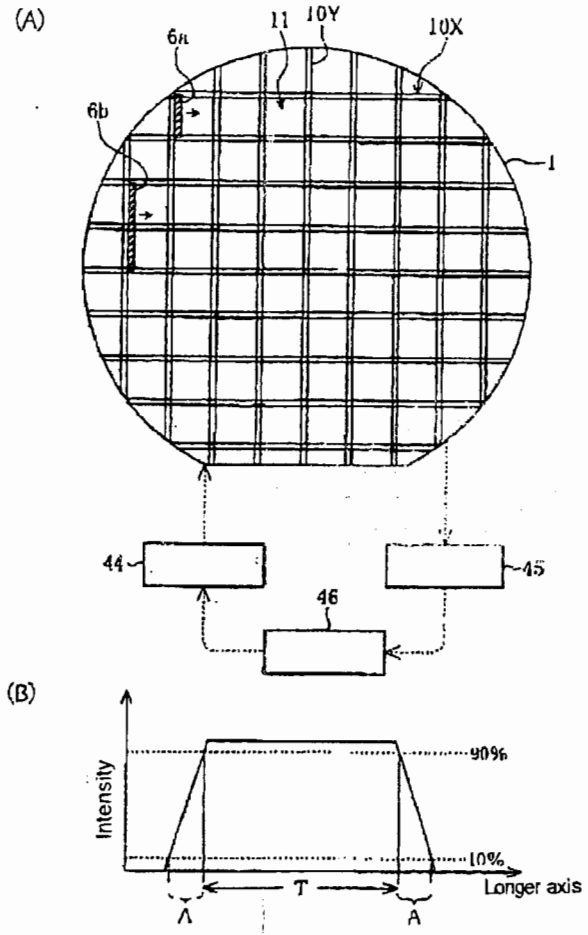

(A)
6a
11
10Y
10X
6b
1
44
45
46
(B)
Intensity
90%
10%
T
A
A
Longer axis

Fig. 10

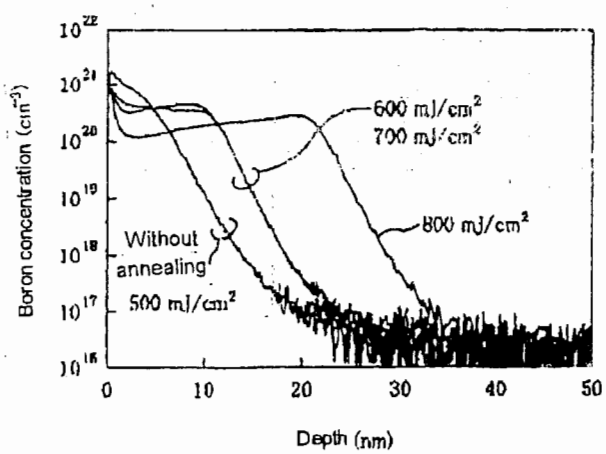

Boron concentration (cm⁻³)
600 mJ/cm²
700 mJ/cm²
800 mJ/cm²
Without annealing
500 mJ/cm²
Depth (nm)

Fig. 11

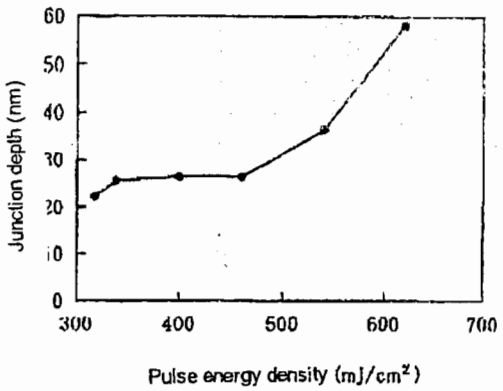
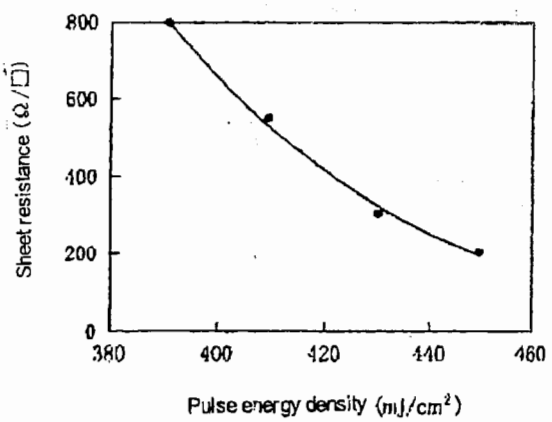

Junction depth (nm)
60
50
40
30
20
10
0
300
400
500
600
700
Pulse energy density (mJ/cm²)

Fig. 12


Sheet resistance (Ω/□)
800
600
400
200
0
380
400
420
440
460
Pulse energy density (mJ/cm²)