Fig. 1

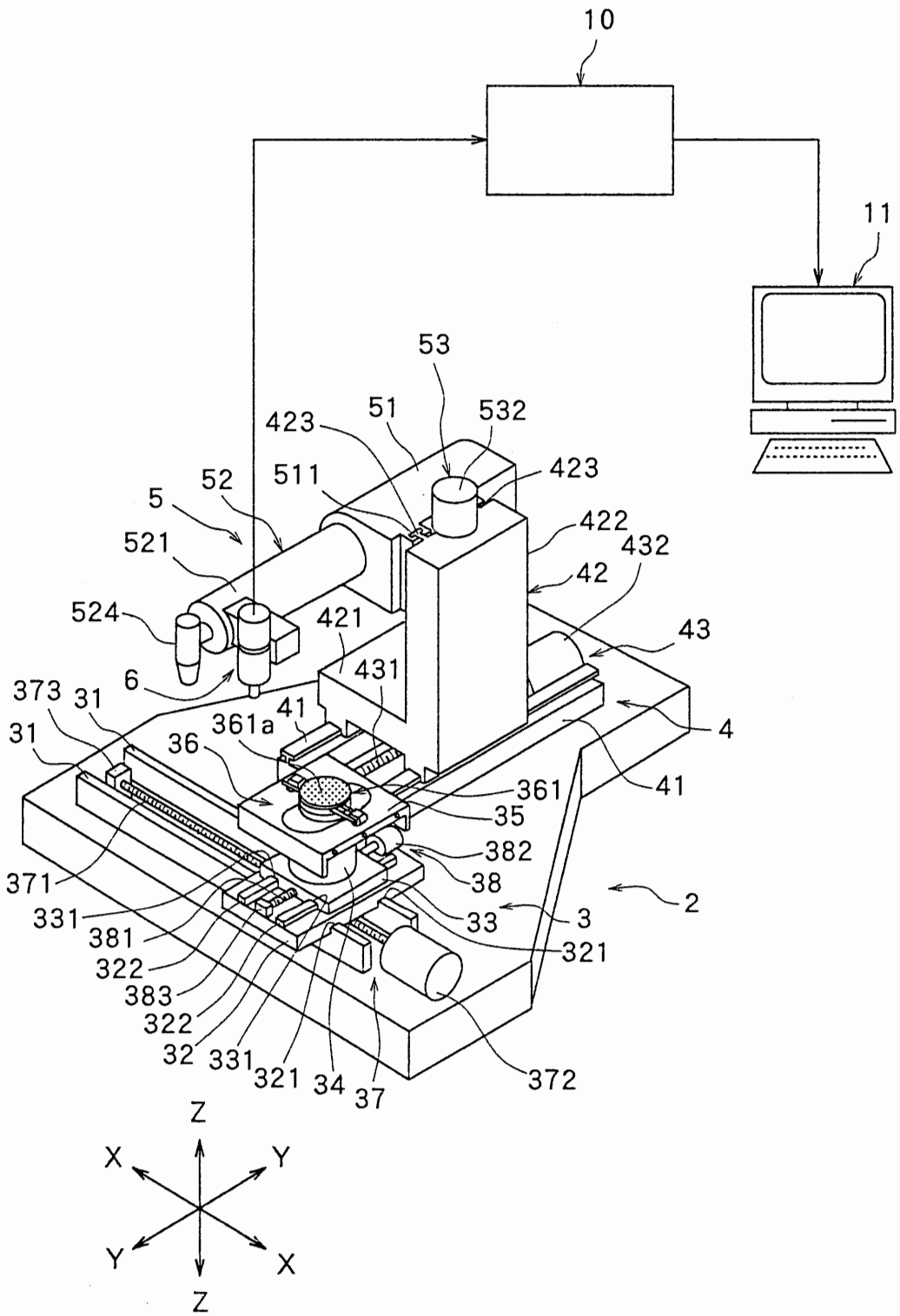

10
11
53
51
532
423
423
52
511
5
422
521
432
42
524
421
43
431
6
373
31
41
361a
31
36
4
361
41
35
382
371
38
2
331
33
3
381
321
322
383
322
32
331
321
34
37
372
Z
X
Y
Y
X
Z

Fig. 2

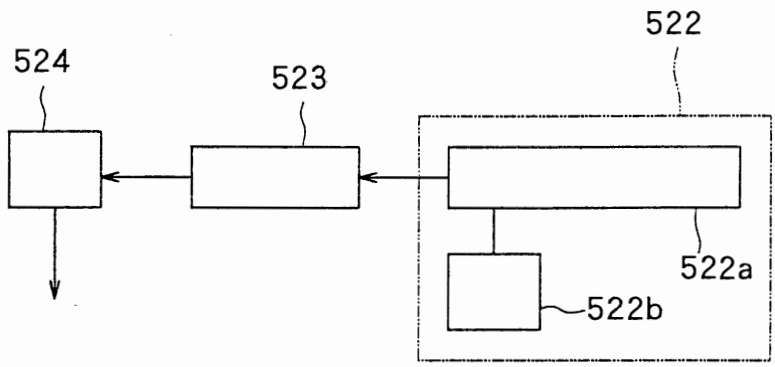


Fig. 3

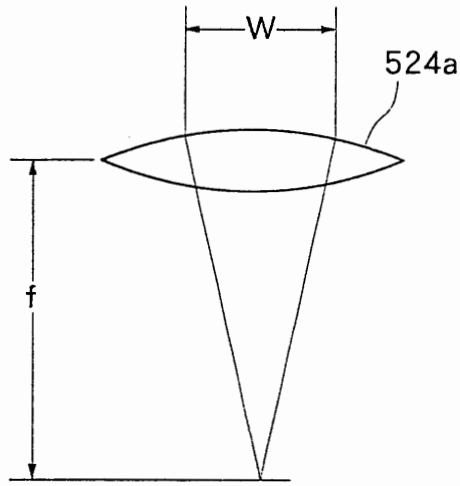


Fig. 4

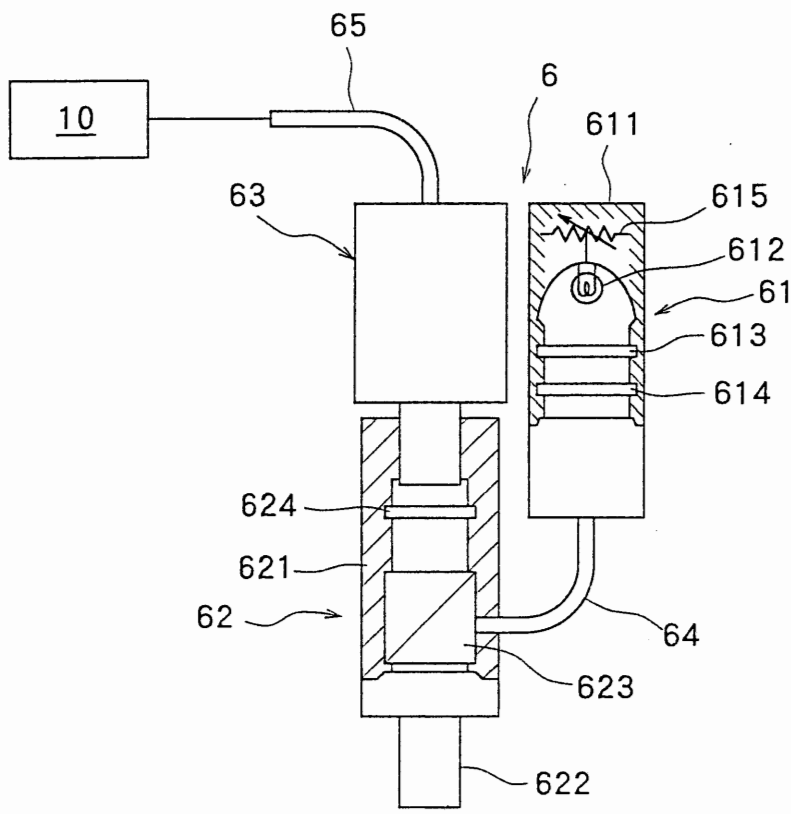


Fig. 5

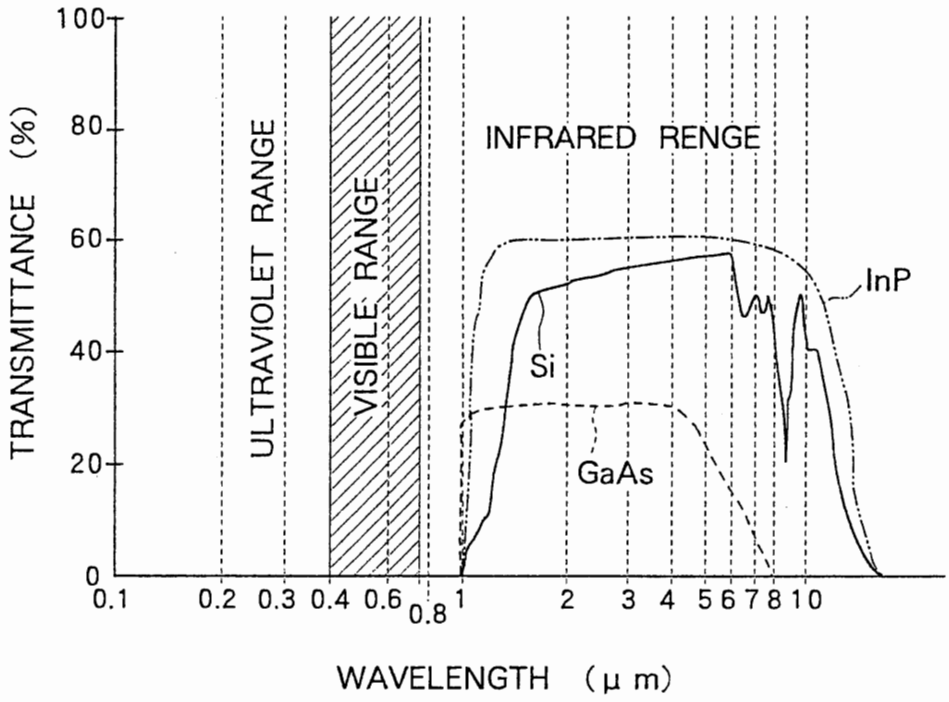

100
80
60
40
20
0
TRANSMITTANCE (%)
ULTRAVIOLET RANGE
VISIBLE RANGE
INFRARED RENGE
InP
Si
GaAs
0.1
0.2
0.3
0.4
0.6
0.8
1
2
3
4
5
6
7
8
10
WAVELENGTH (μ m)

Fig. 6

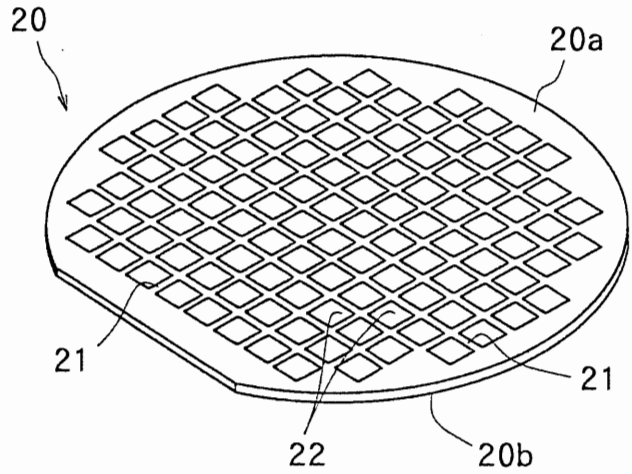

20
20a
21
21
22
20b

Fig. 7

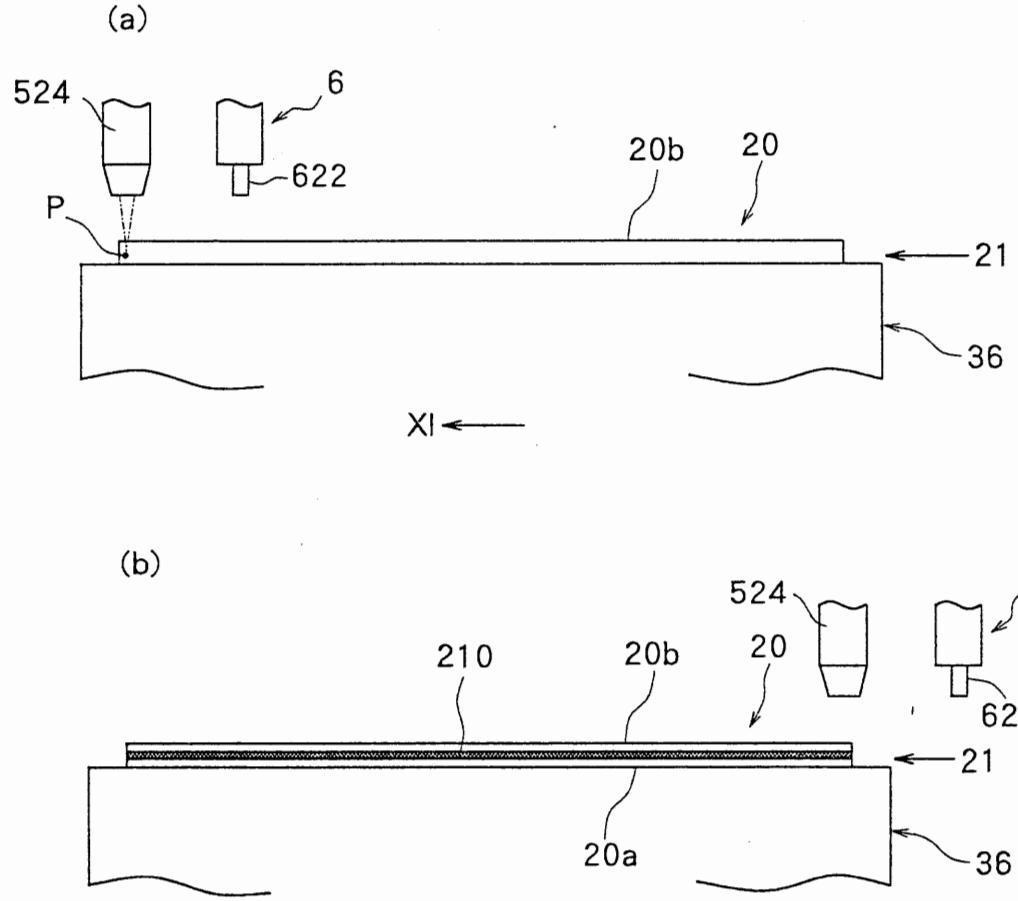

(a)
524
6
622
20b
20
P
21
36
XI
(b)
524
6
210
20b
20
622
21
20a
36

Fig. 8

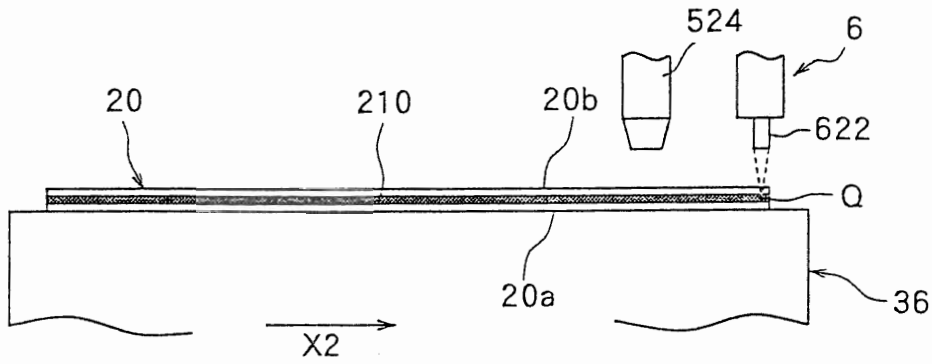


Fig. 9

