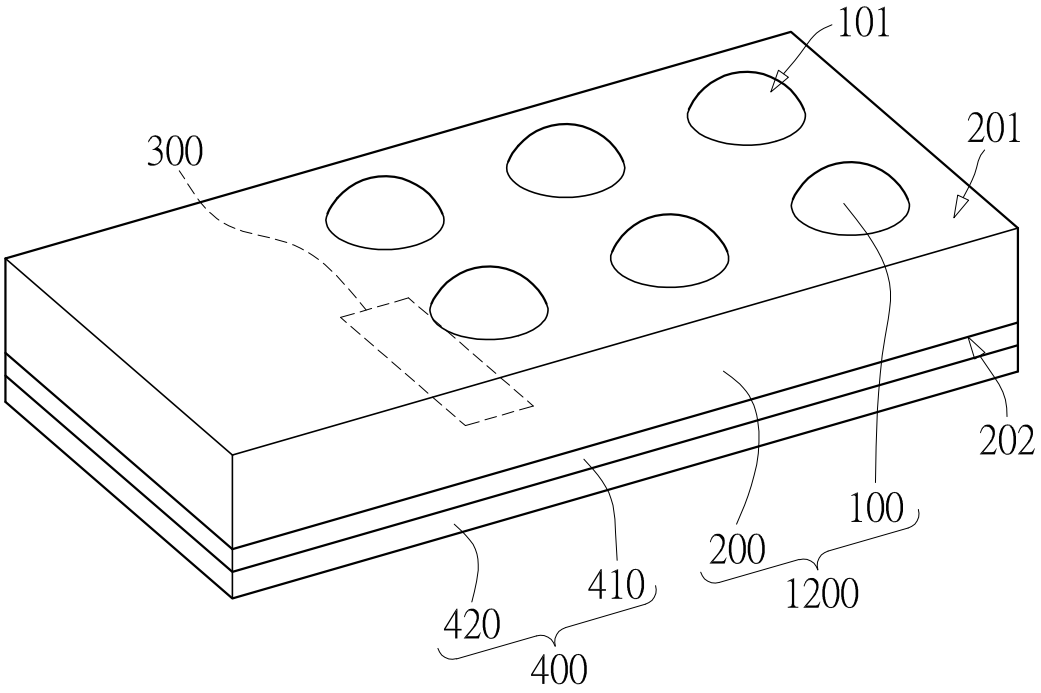

FIG. 1

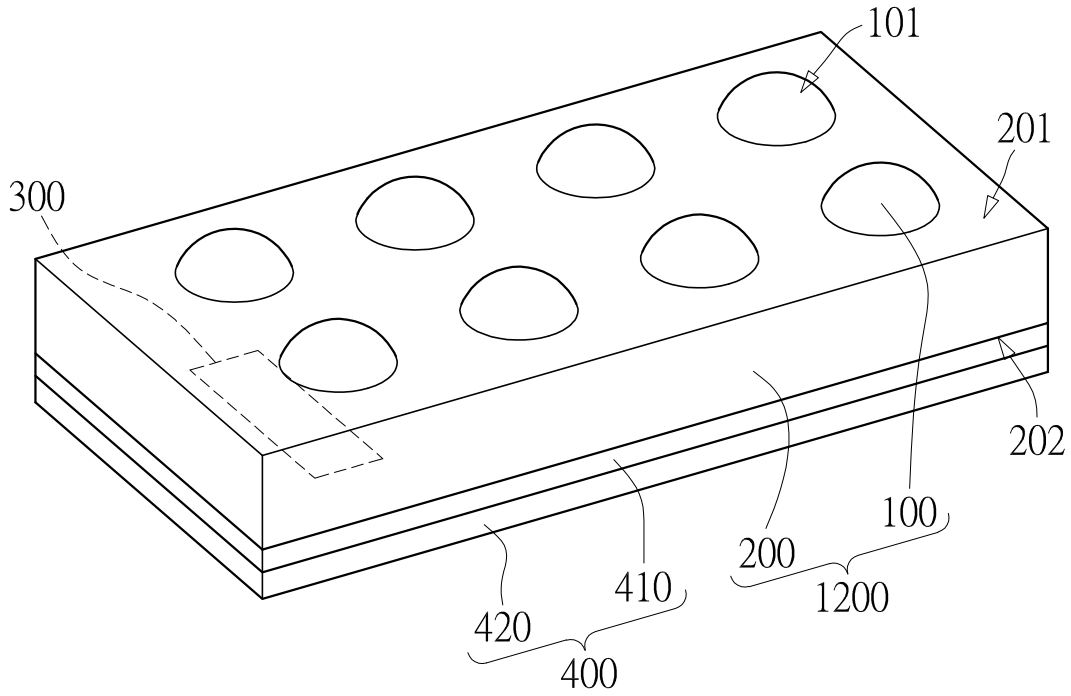

FIG. 2

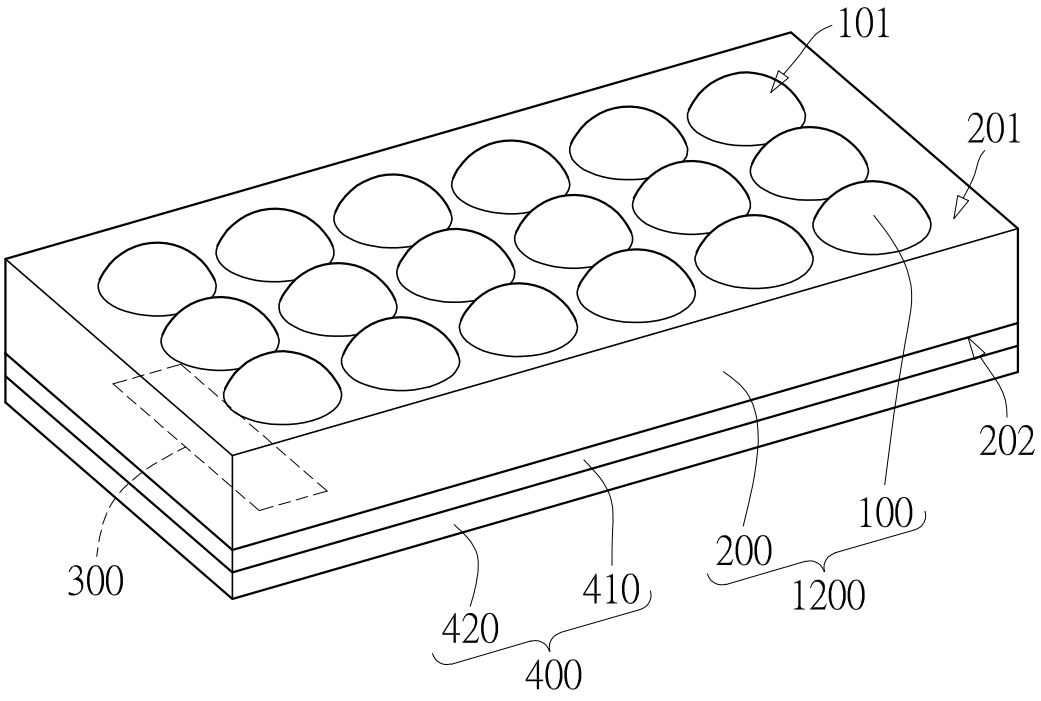

FIG. 3

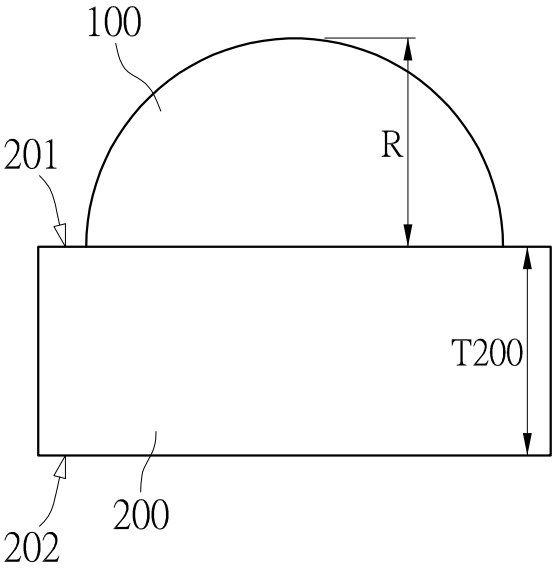

FIG. 4

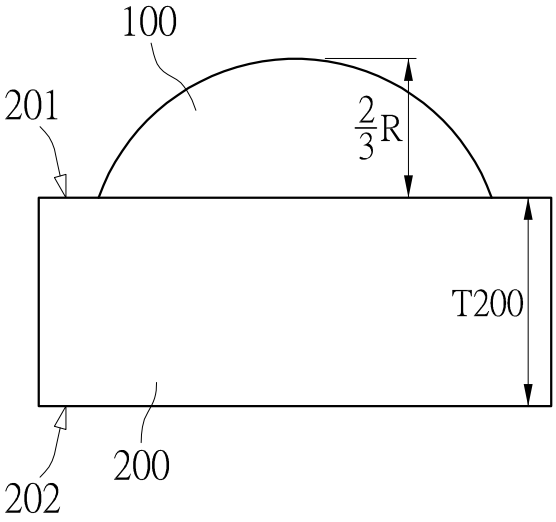

FIG. 5

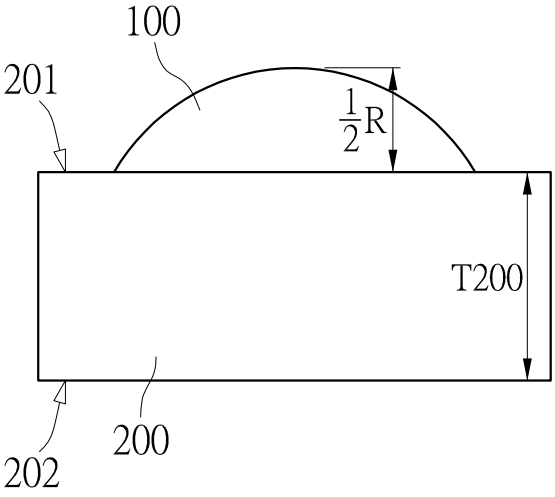

FIG. 6

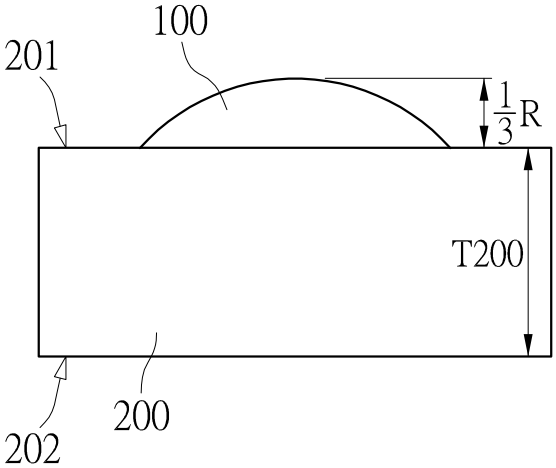

FIG. 7

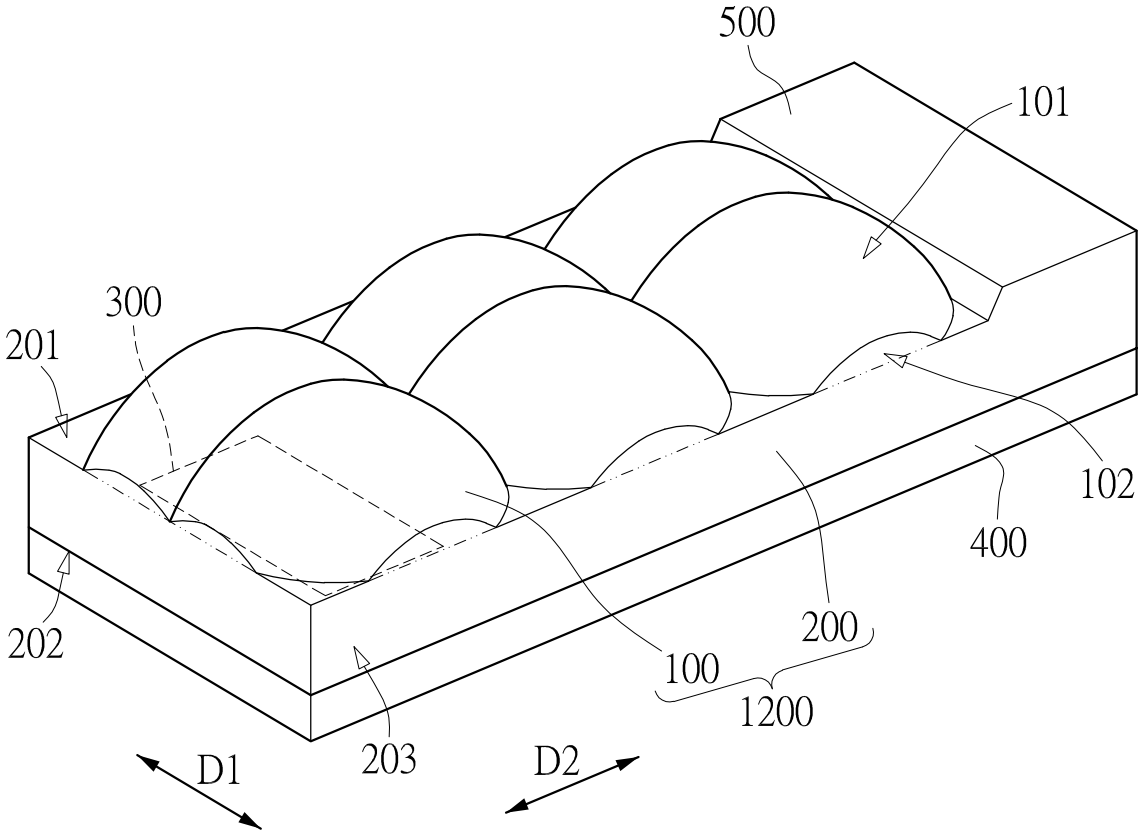
500
101
300
201
102
400
200
100
1200
202
203
D1
D2

FIG. 8

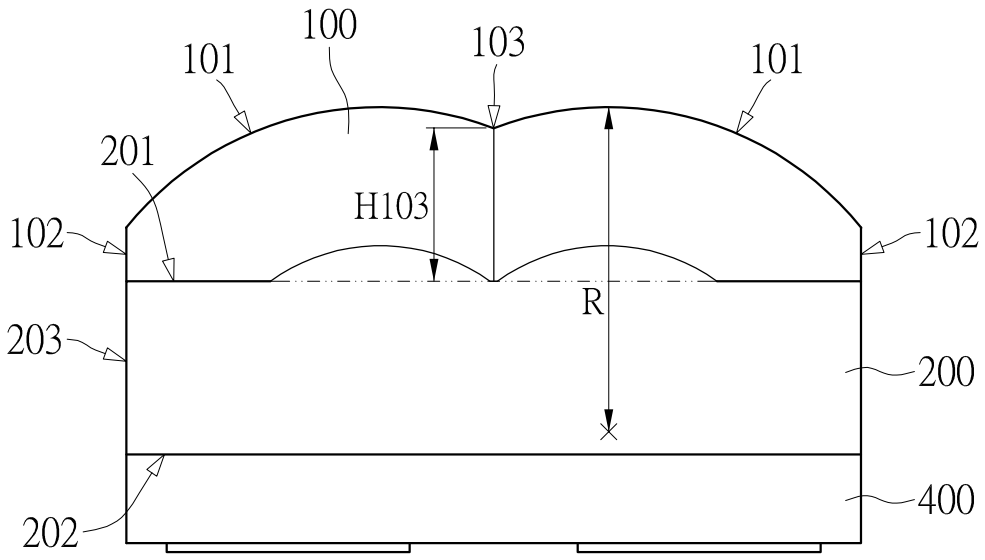
100
101
103
101
201
H103
102
102
R
203
200
400
202

FIG. 9

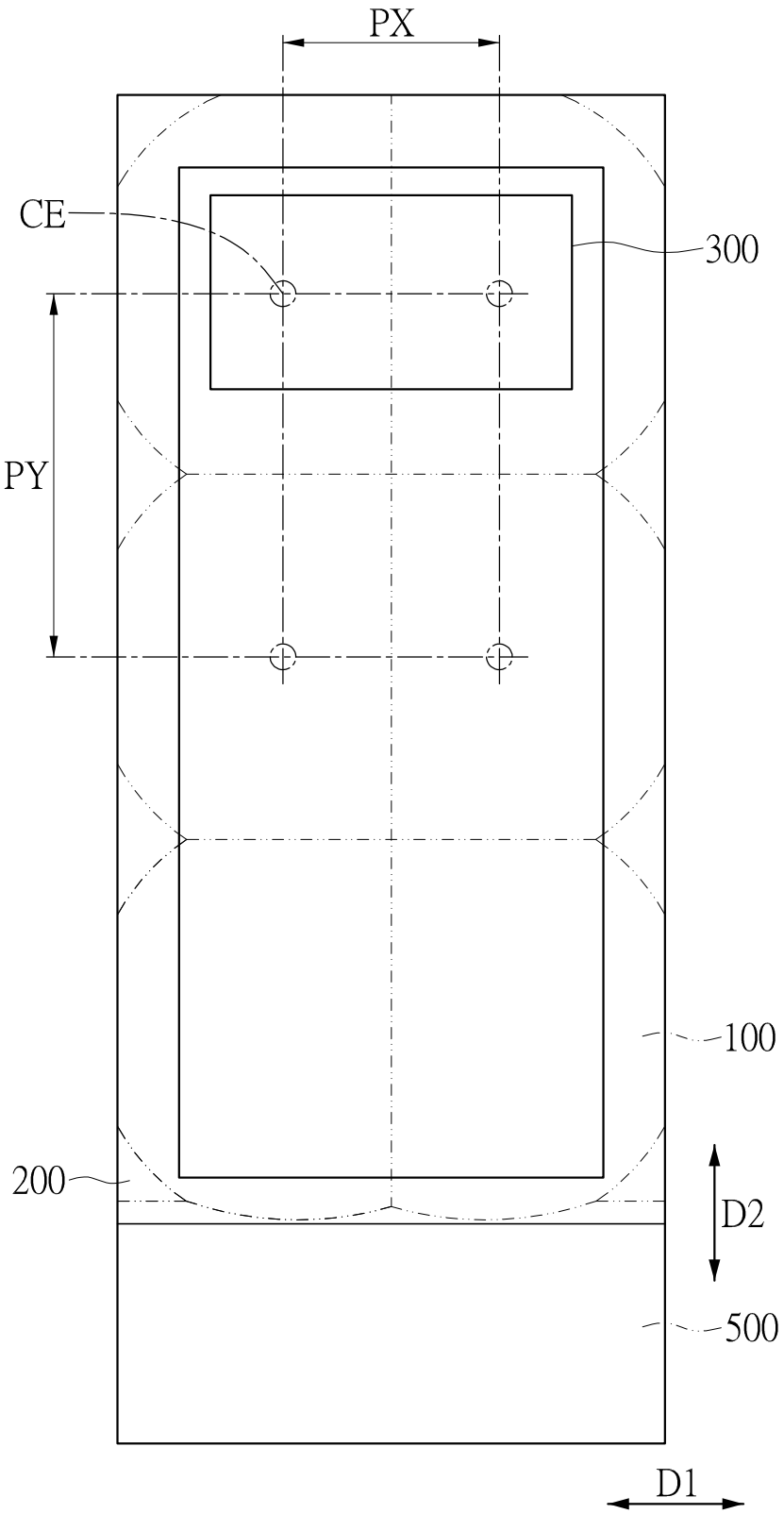

FIG. 10

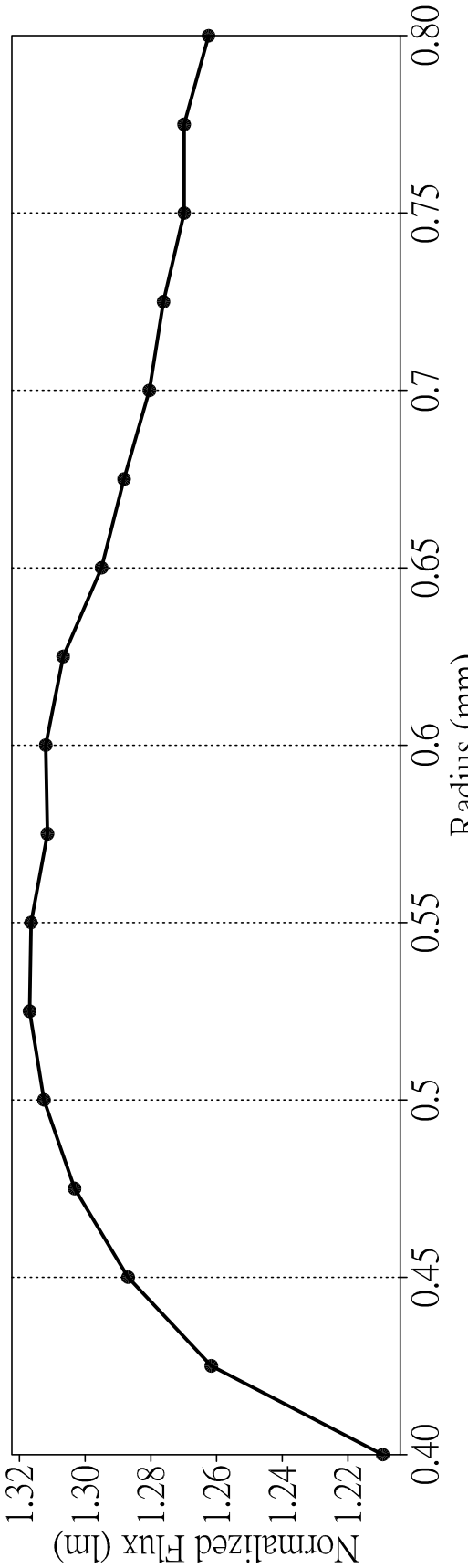
Normalized Flux (lm)
1.32
1.30
1.28
1.26
1.24
1.22
0.40
0.45
0.5
0.55
0.6
0.65
0.7
0.75
0.80
Radius (mm)

FIG. 11

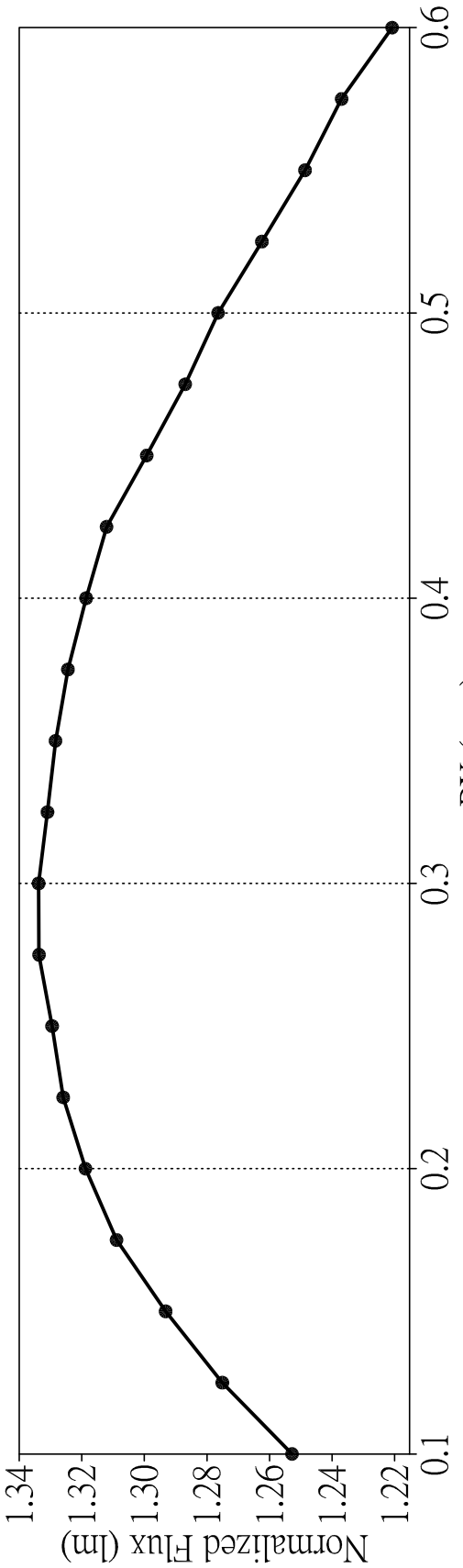
Normalized Flux (lm)
1.34
1.32
1.30
1.28
1.26
1.24
1.22
0.1
0.2
0.3
0.4
0.5
0.6
PX (mm)

FIG. 12

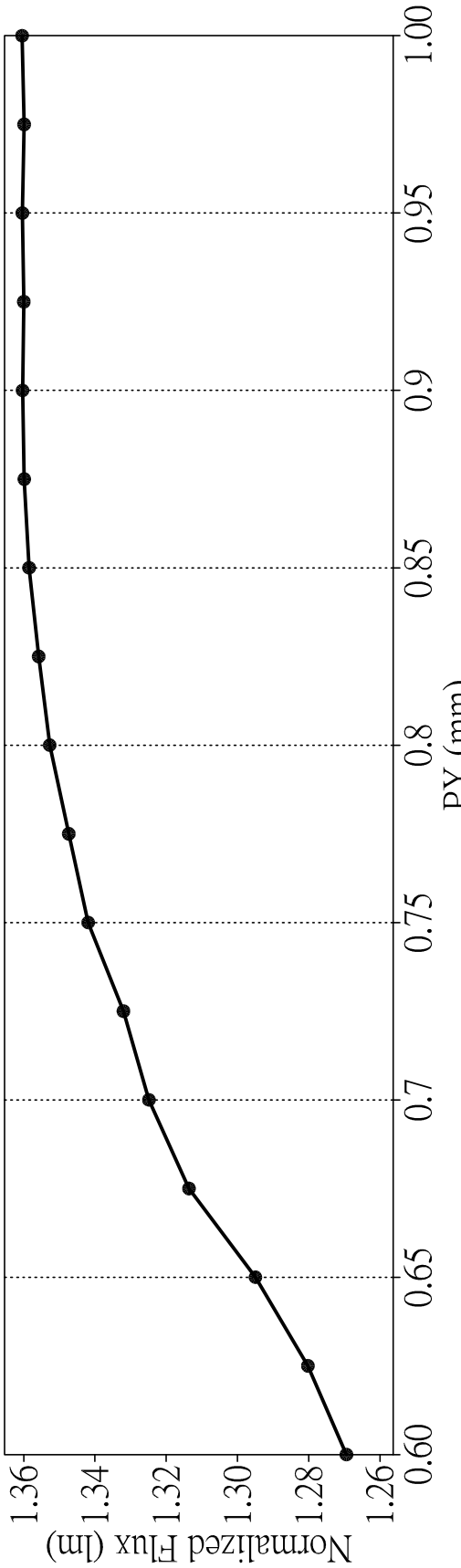
Normalized Flux (lm)
1.36
1.34
1.32
1.30
1.28
1.26
0.60
0.65
0.7
0.75
0.8
0.85
0.9
0.95
1.00
PY (mm)

FIG. 13

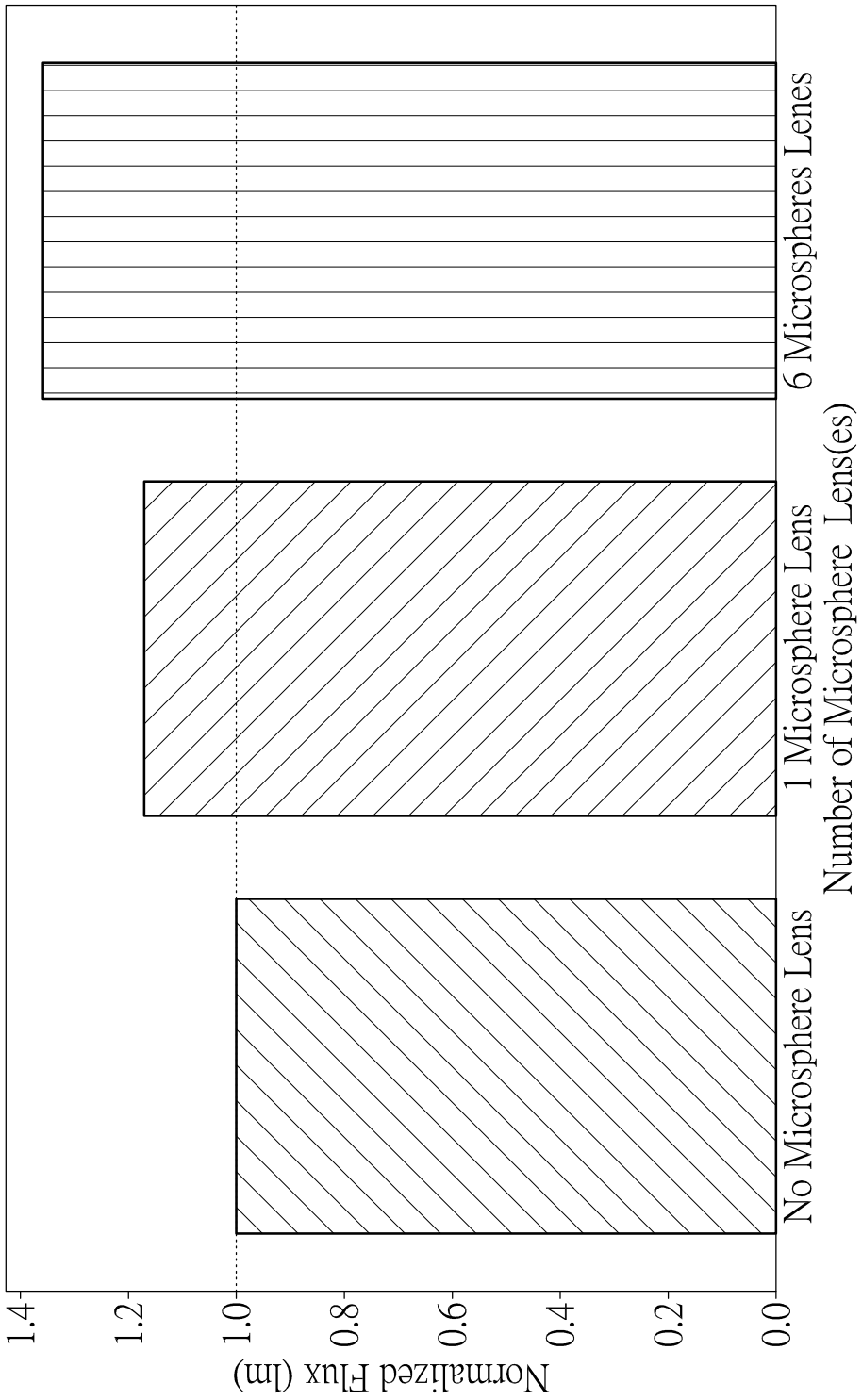
Normalized Flux (lm)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
No Microsphere Lens
1 Microsphere Lens
6 Microspheres Lenes
Number of Microsphere Lens(es)

FIG. 14