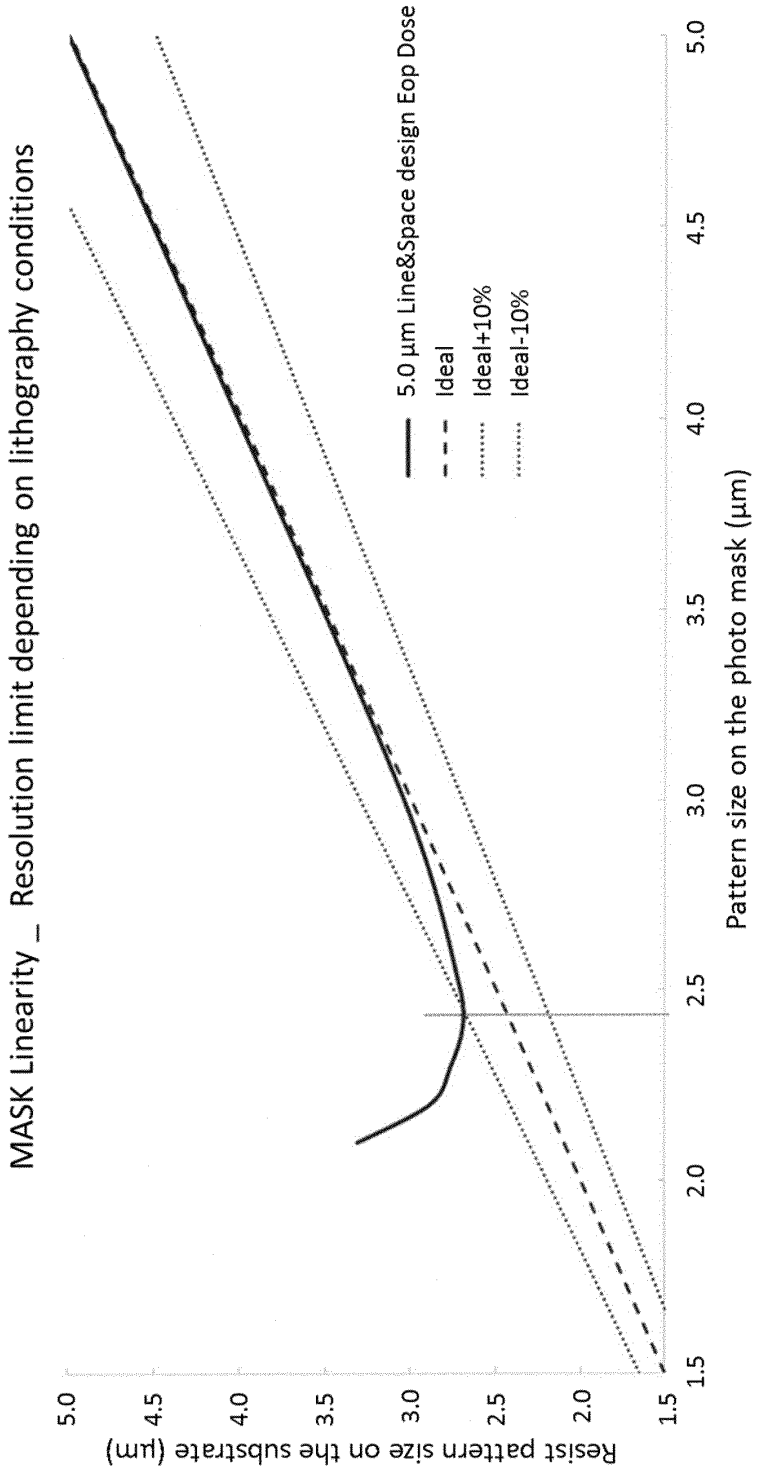

MASK Linearity _ Resolution limit depending on lithography conditions
5.0 µm Line&Space design Eop Dose
Ideal
Ideal+10%
Ideal-10%
Resist pattern size on the substrate (µm)
Pattern size on the photo mask (µm)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5

FIG. 1

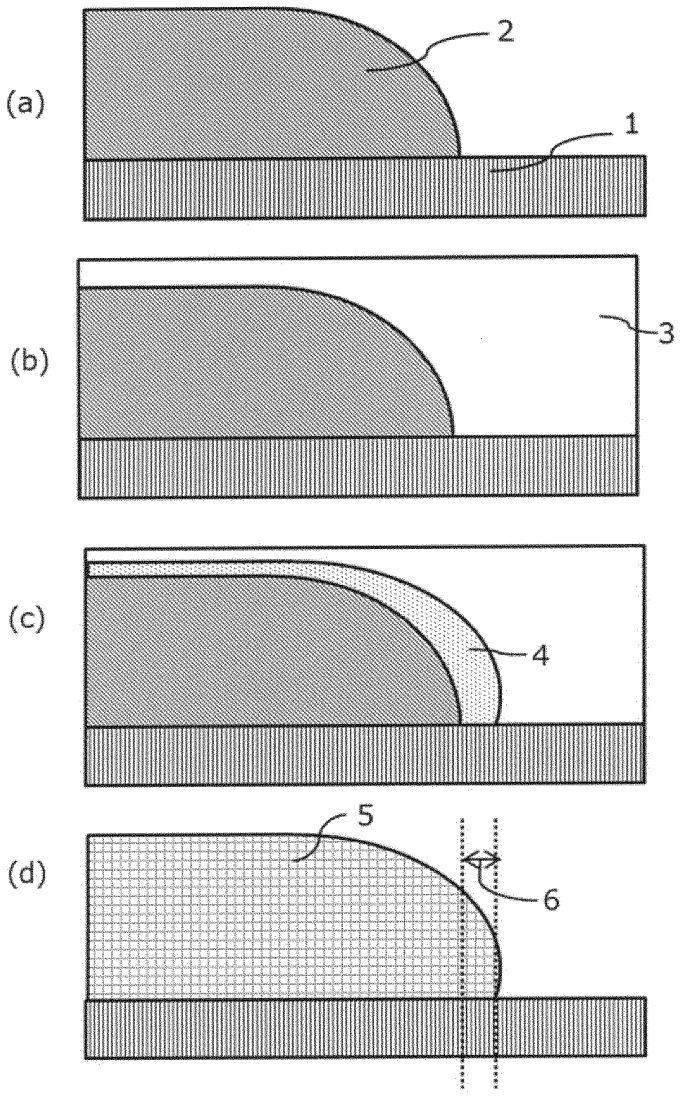



FIG. 2

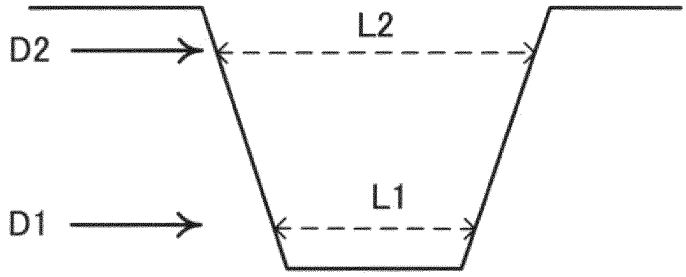



FIG. 3

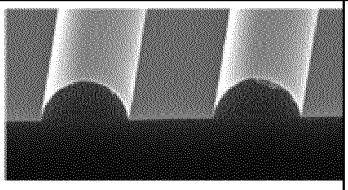
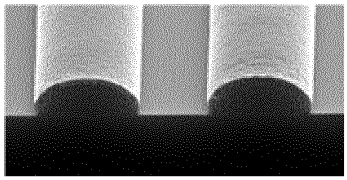
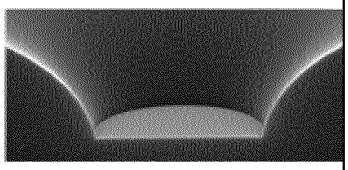
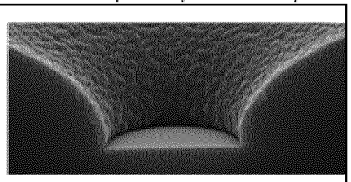
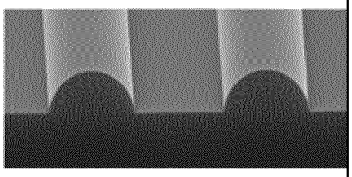
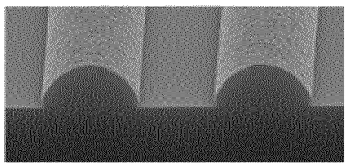
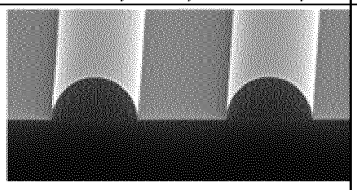
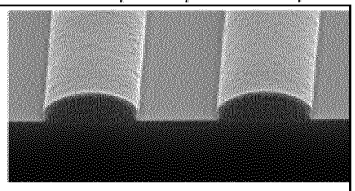
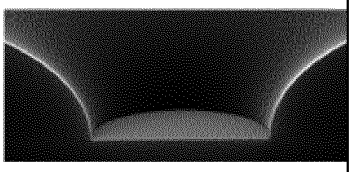
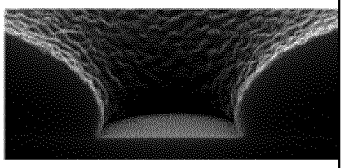
| Example | Resist pattern | Fine pattern |
|---|---|---|
| 1 |  Line 3.06μm、Space2.94μm |  Line 3.58μm、Space 2.42μm |
| 2 |  Hole 3.08μm |  Hole 2.57μm |
| 3 |  Line 2.98μm、Space 3.02μm |  Line 3.28μm、Space 2.72μm |
| 4 |  Line 2.97μm、Space 3.03μm |  Line 3.41μm、Space 2.59μm |
| 5 |  Hole 3.07μm |  Hole 2.63μm |

FIG. 4-1

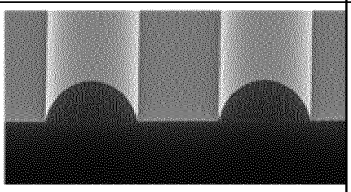
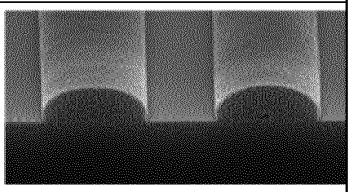
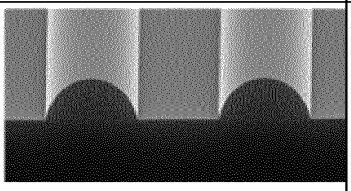
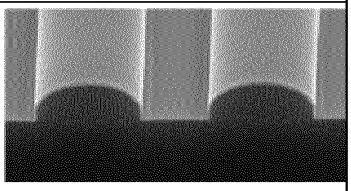
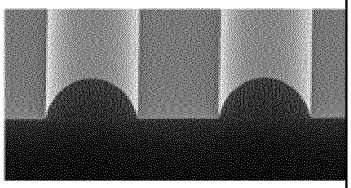
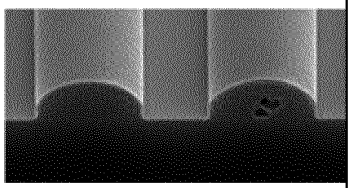
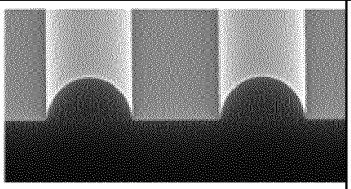
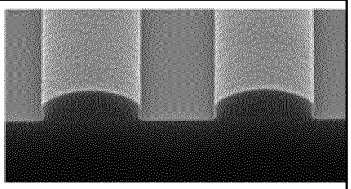
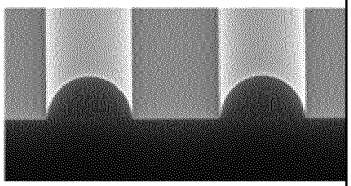
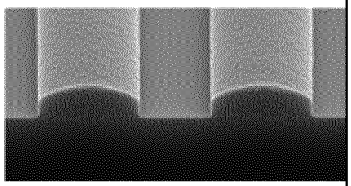
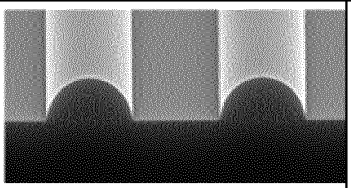
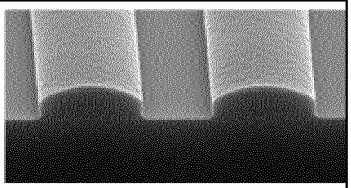
| Example | Resist pattern | Fine pattern |
|---|---|---|
| 6 |  Line 3.17μm, Space 2.83μm |  Line 3.54μm, Space 2.46μm |
| 7 |  Line 3.17μm, Space 2.83μm |  Line 3.68μm, Space 2.32μm |
| 8 |  Line 3.17μm, Space 2.83μm |  Line 3.73μm, Space 2.27μm |
| 9 |  Line 3.04μm, Space 2.96μm |  Line 3.62μm, Space 2.38μm |
| 10 |  Line 3.04μm, Space 2.96μm |  Line 3.81μm, Space 2.19μm |
| 11 |  Line 3.04μm, Space 2.96μm |  Line 3.95μm, Space 2.05μm |

FIG. 4-2