

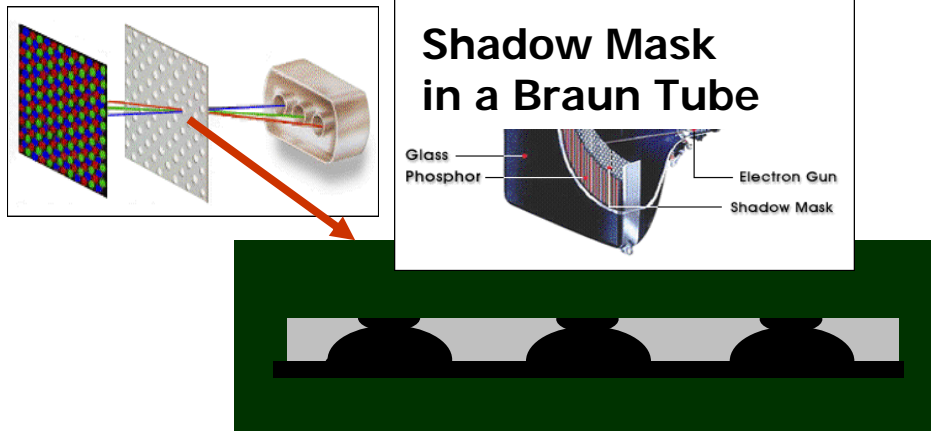
Design of Optimal Spray Nozzle System for Shadow Mask Production

● Motivation

- Etching quality of shadow mask largely depends on design and operation condition of spray nozzle process.
- A lot of design parameters make the design and operation of spray nozzle process very difficult.

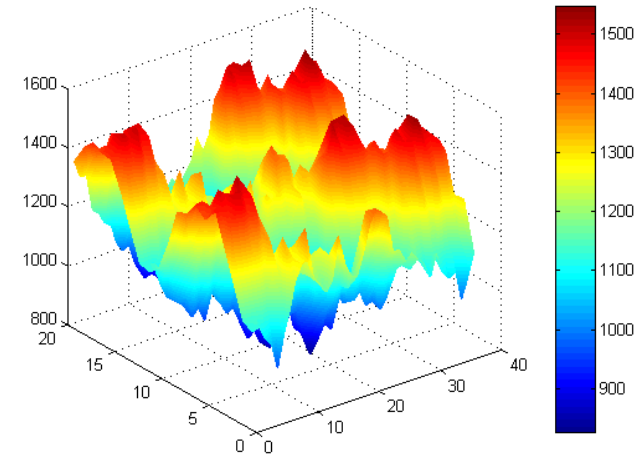
● What we have done

- Modeling of multi nozzle spraying system using Monte-Carlo technique
- Find optimal nozzle position, number, angle, shaking angular speed, plate moving speed,
- Result was applied to construction of new plant.

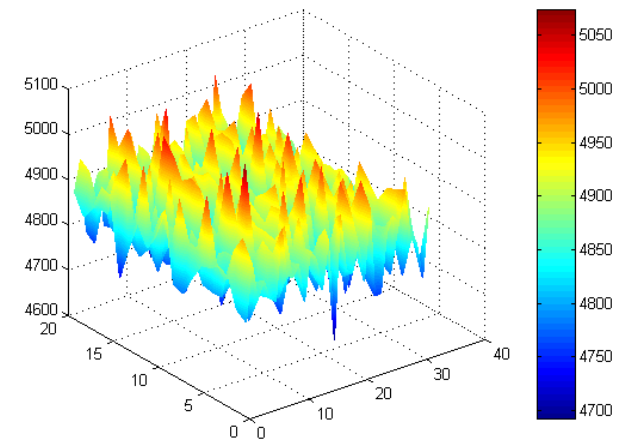


Typical Etching Pattern on Shadow Mask Plate

with LG Micron



Nozzle spray pattern : Worst Case.



Nozzle spray pattern : Best Case.