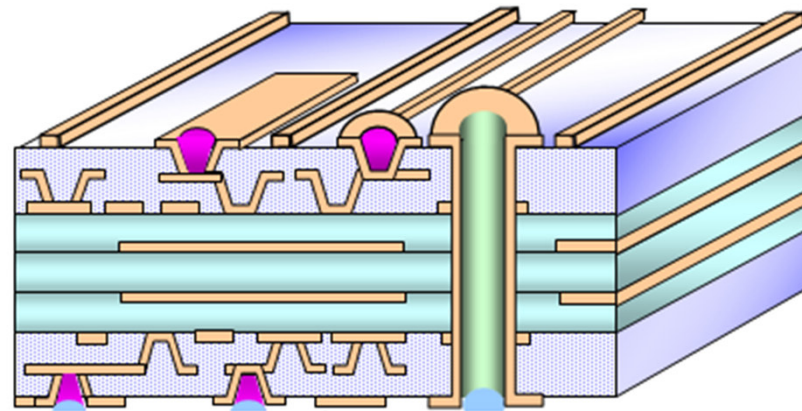


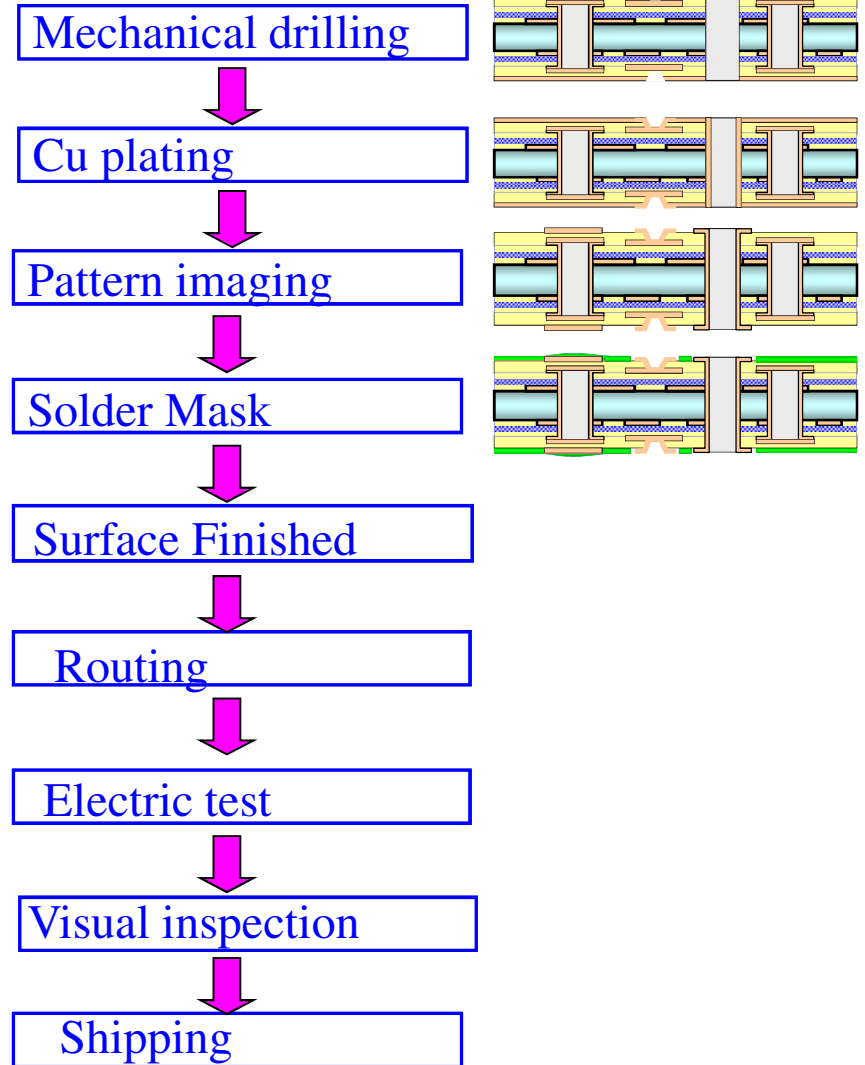
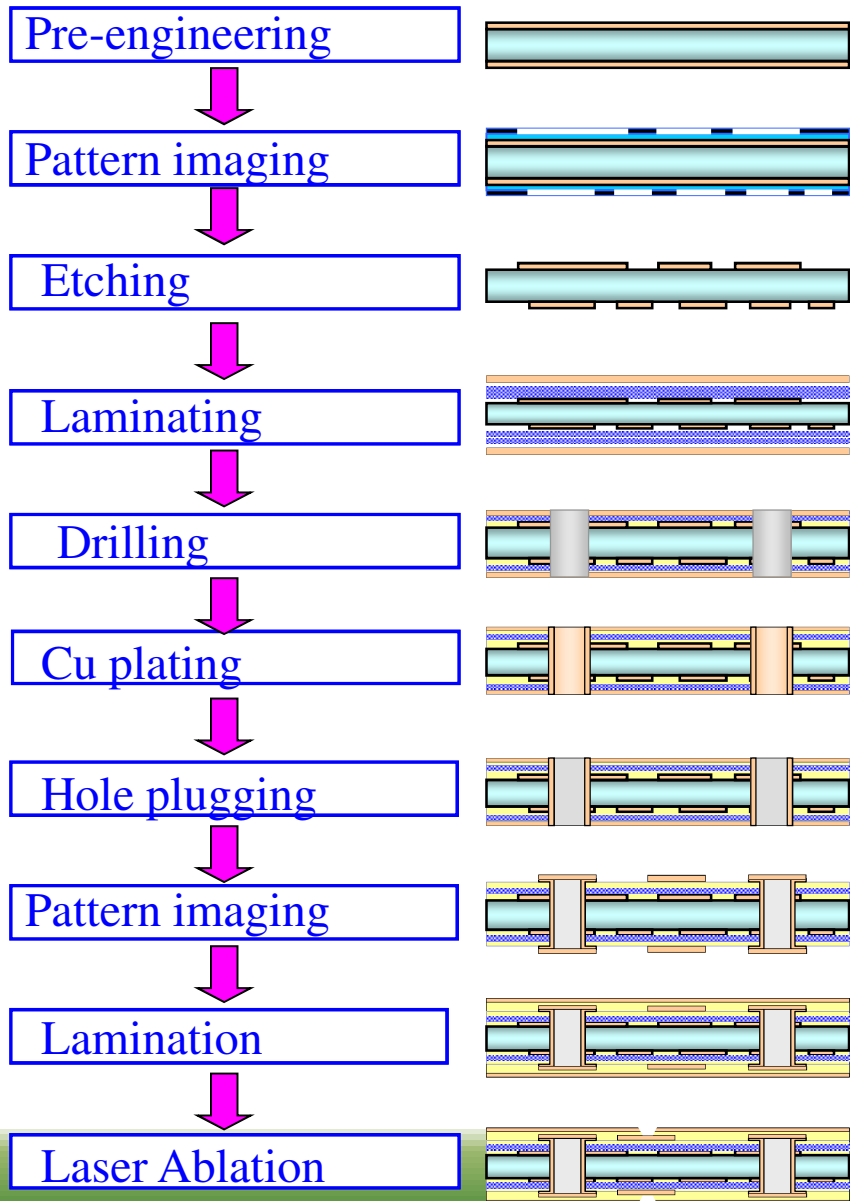
Start

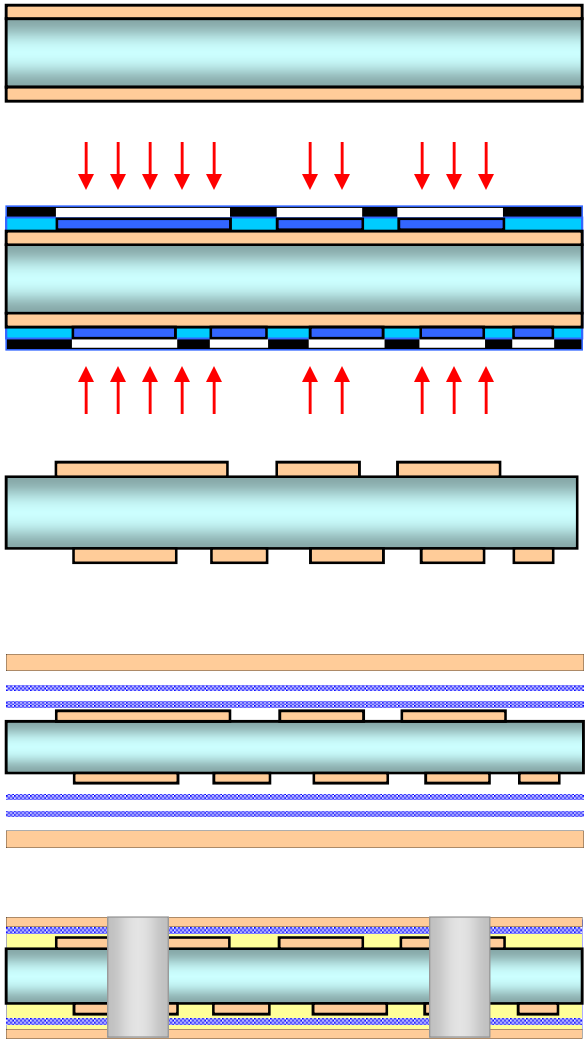
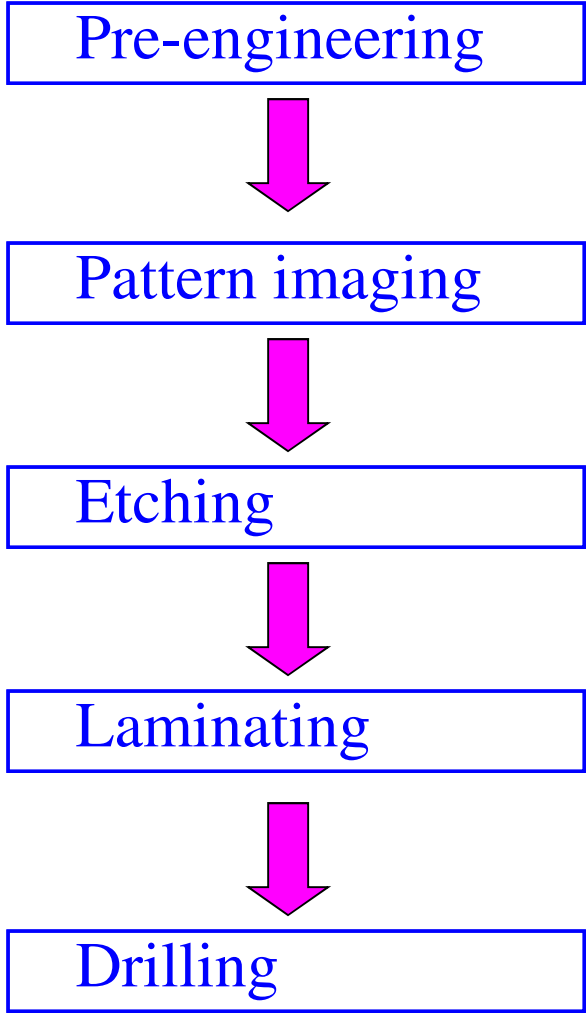


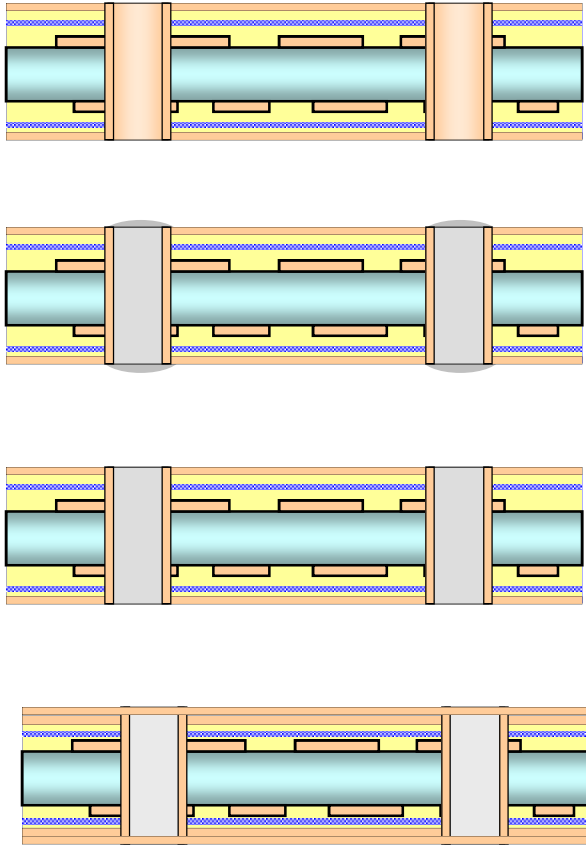
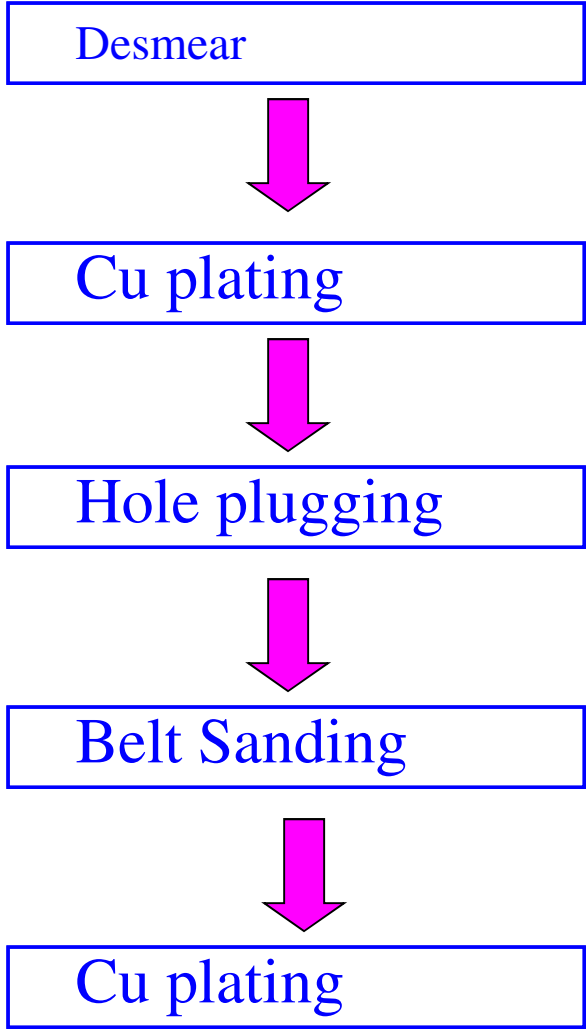
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# HDI Manufacturing Process Flow

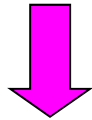
# HPCB



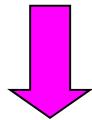




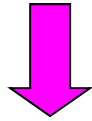
Pattern imaging



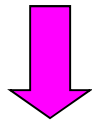
Lamination



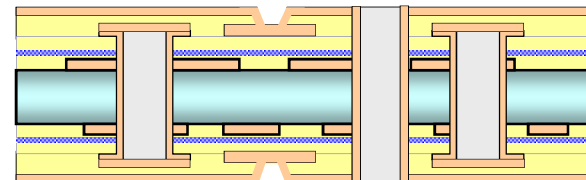
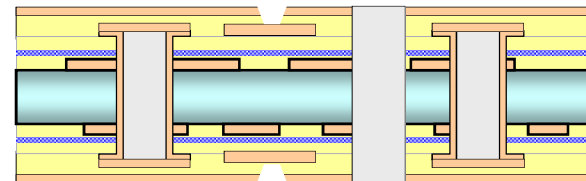
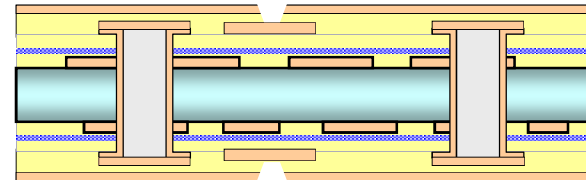
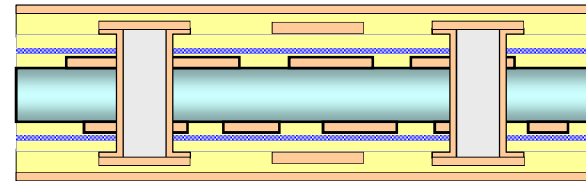
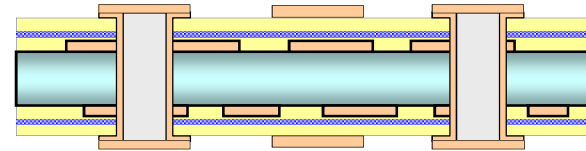
Laser Ablation



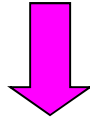
Mechanical drilling



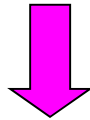
Cu plating



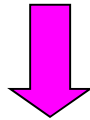
Pattern imaging



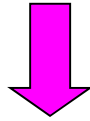
Solder Mask



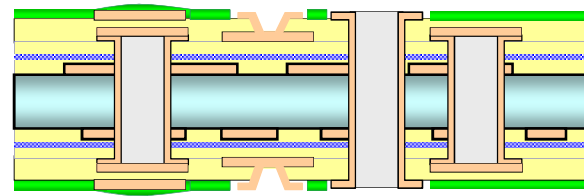
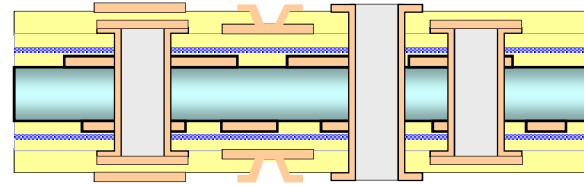
Gold plating



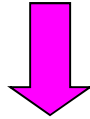
Routing



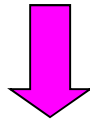
Electrical test



Visual inspection



Hole counter



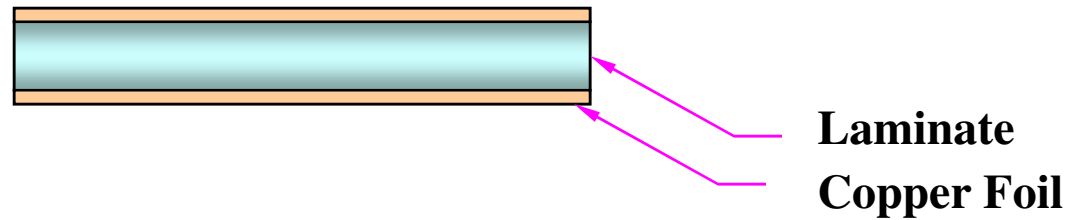
Shipping

## \* Raw material (Thin Core,Copper,Prepreg.....)

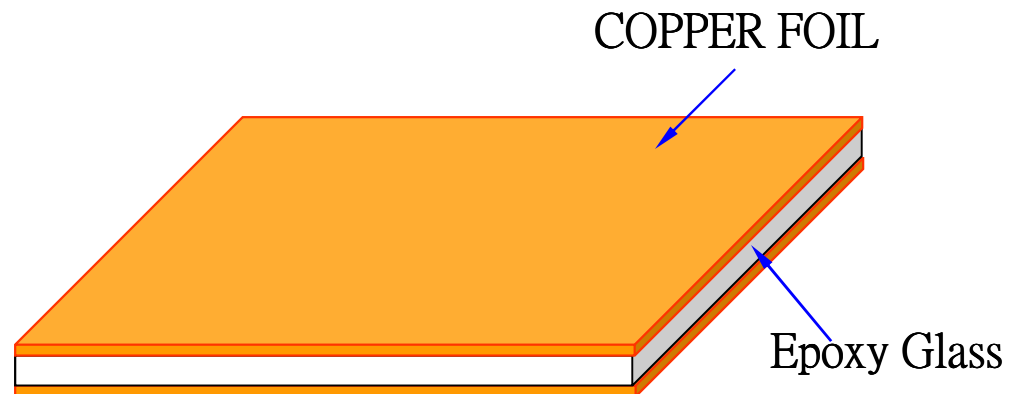
Raw Material : FR-4 (Difuntional,Tetrafunctional)  
Supplier : EMC ,Nan-Ya  
Sheet size : 36''\*48'' , 40''\*48'' ,42''\*48''  
Core Thickness : 0.003'',0.004'',0.005'',0.006''  
0.008'',0.010'',0.012'',0.015''  
0.021'',0.031'',0.039'',0.047''  
Copper Foil : 1/3 oz,1/2 oz,1.0 oz,2 oz  
Prepreg type : 1080,2113,2116,1506,7628,7630



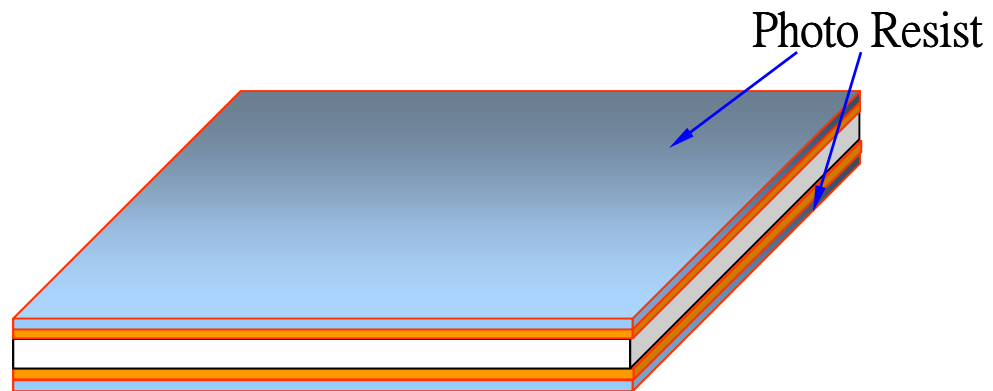
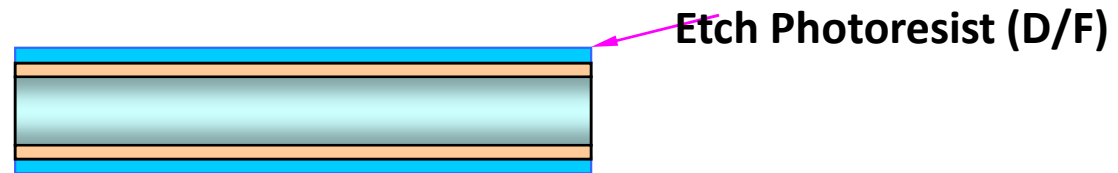
## 1. Innerlayer (THIN CORE)



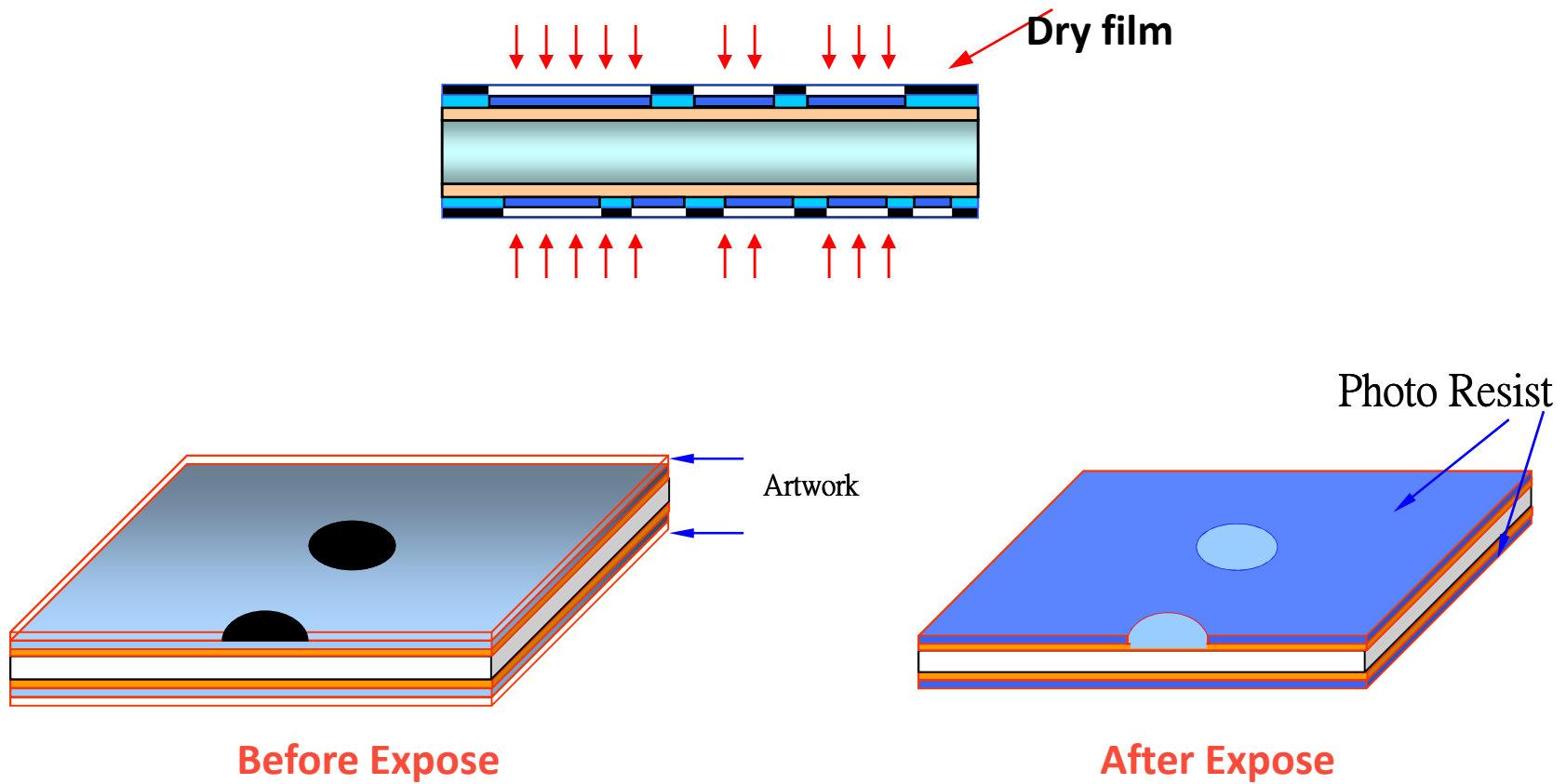
(Panel Size)



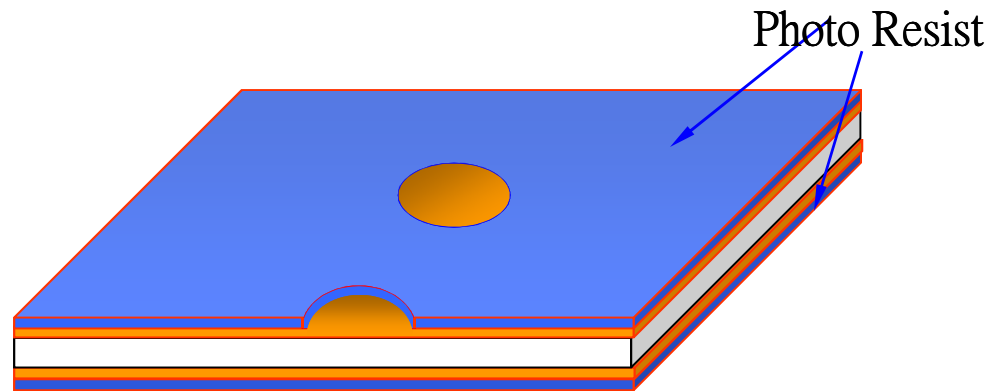
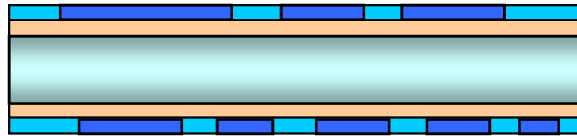
## 2. Dry Film Resist Coat



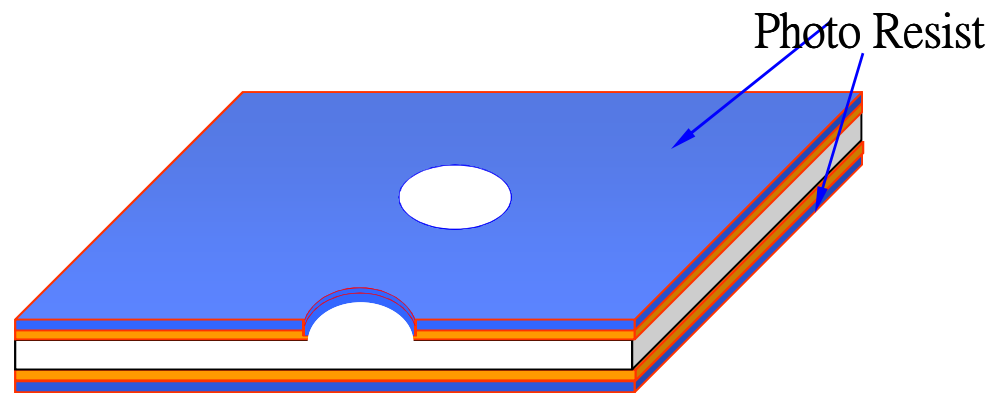
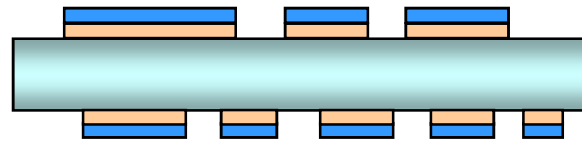
## 3. Inner Artwork Expose



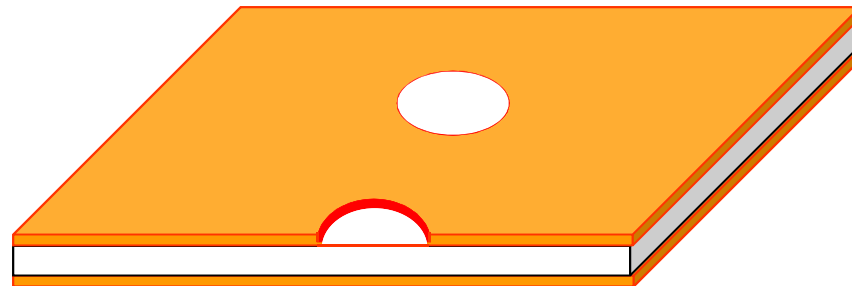
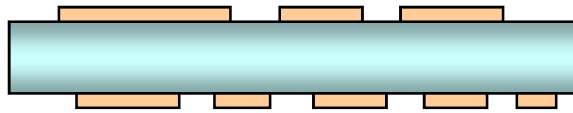
## 4. Inner layer image Develop



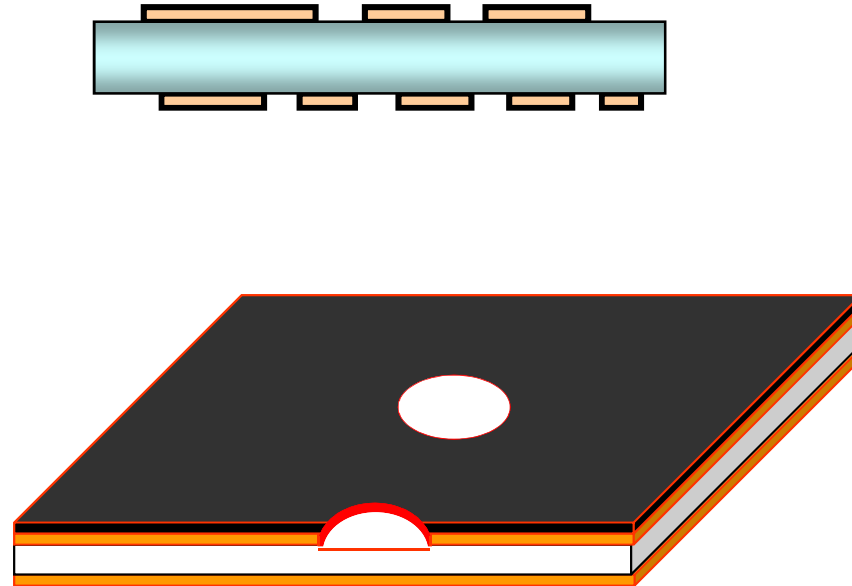
## 5. Inner Layer Etch



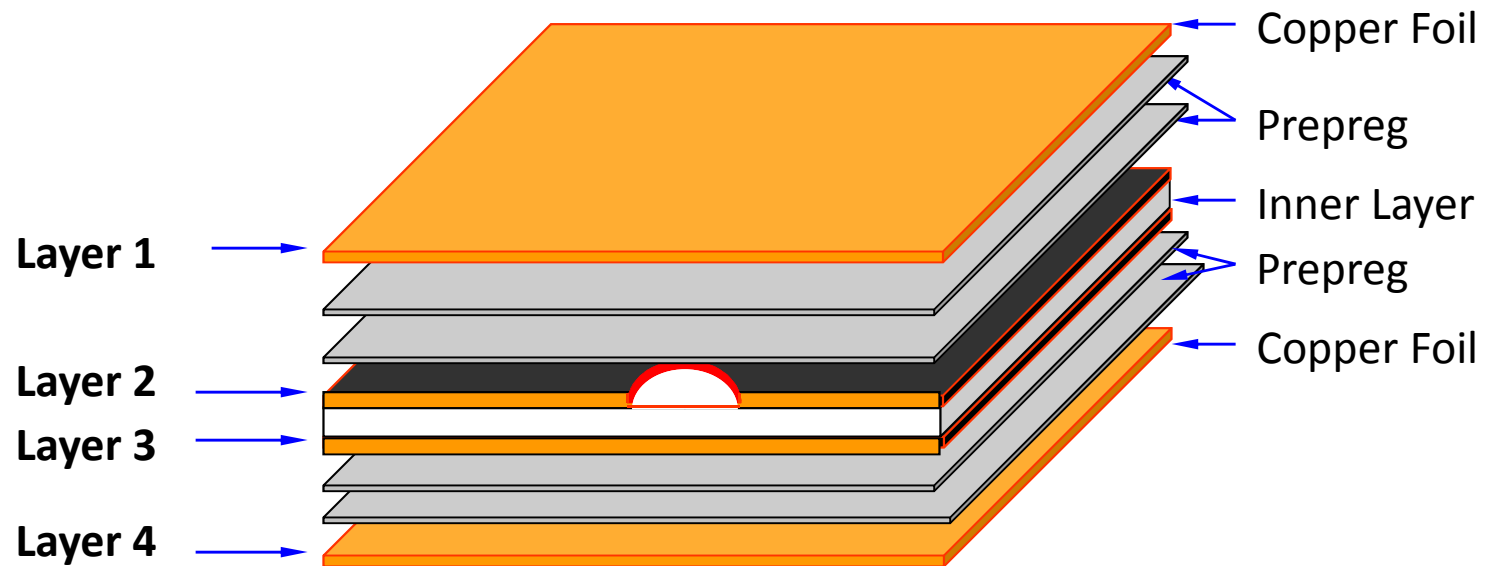
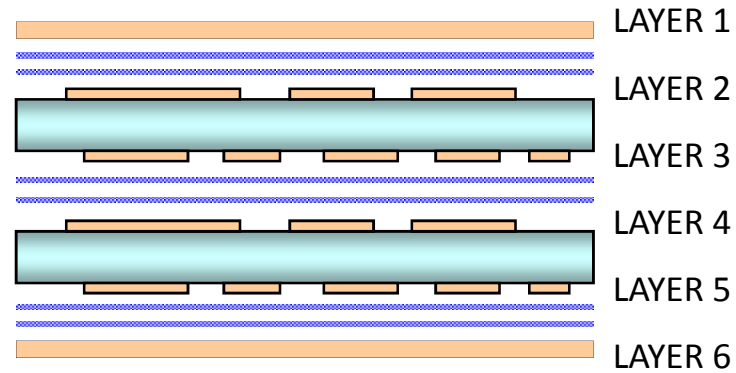
## 6. Inner Layer Strip Resist



## 7. Oxide Coating

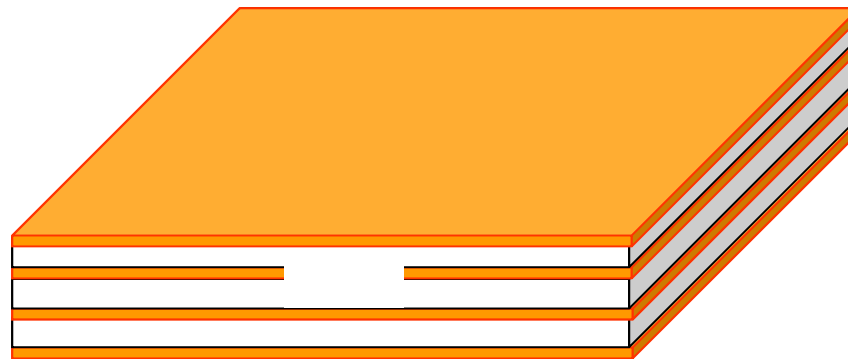
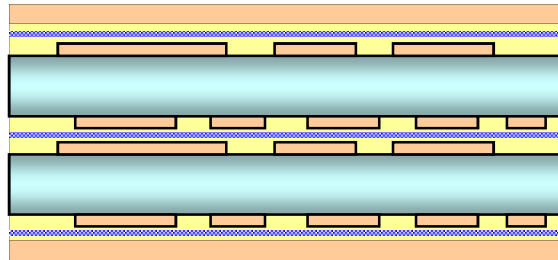


## 8. Lay-up Building



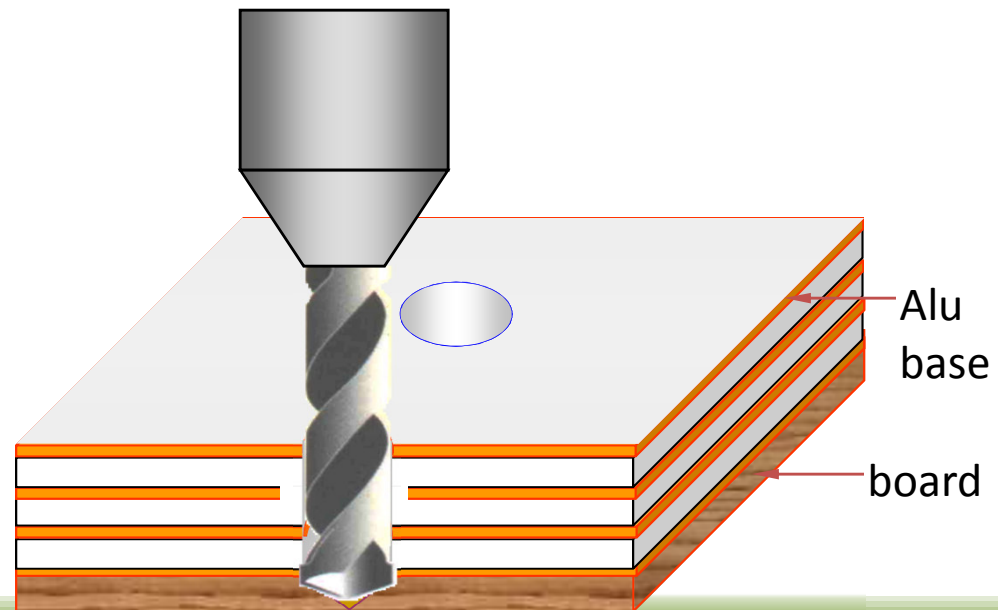
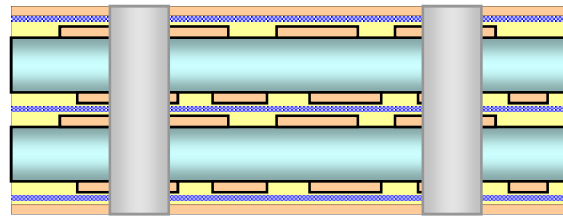


## 9. Lamination

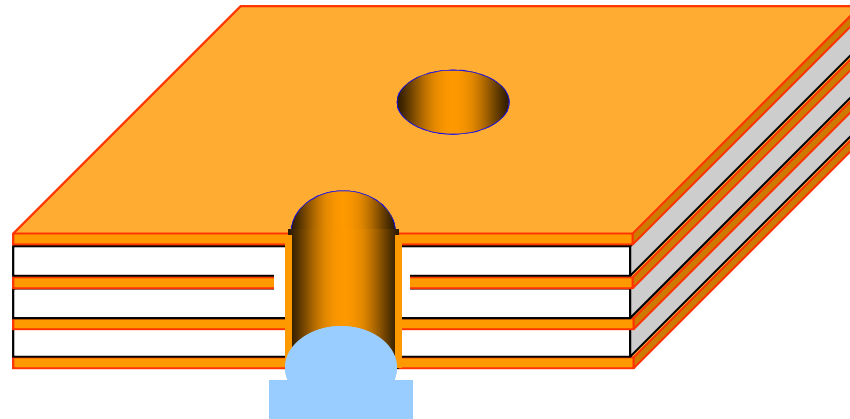
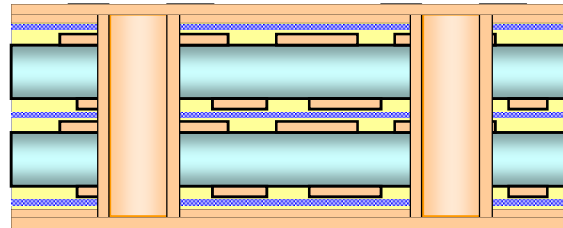




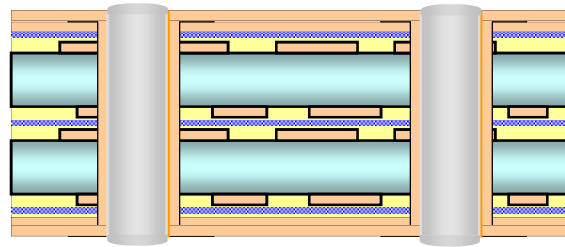
## 10. NC Drilling



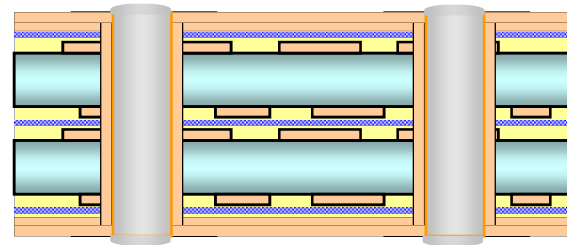
## 11. Desmear & Copper Deposition



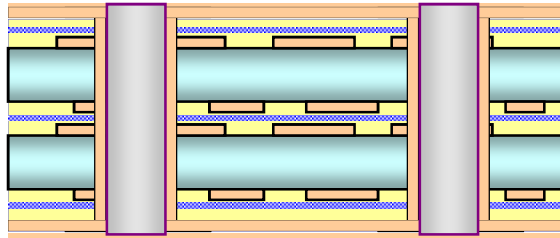
## 12. Hole Plugging



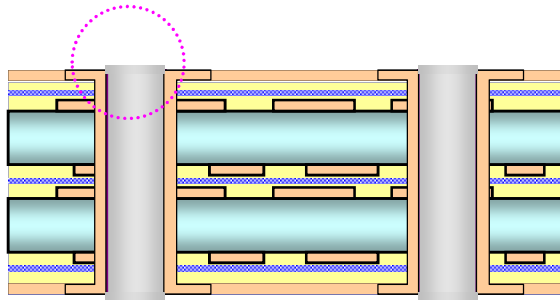
## 13. Belt Sanding



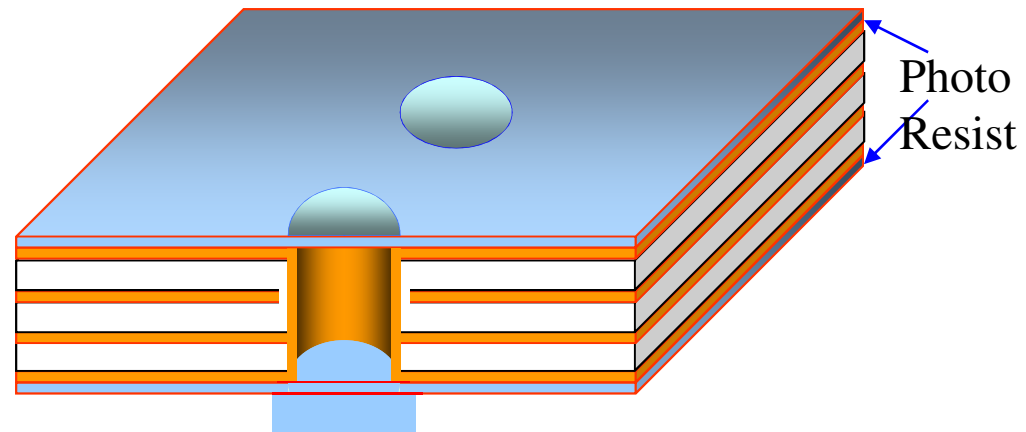
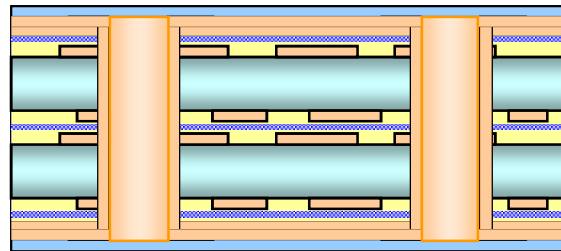
## 14. Copper Reduction → Option



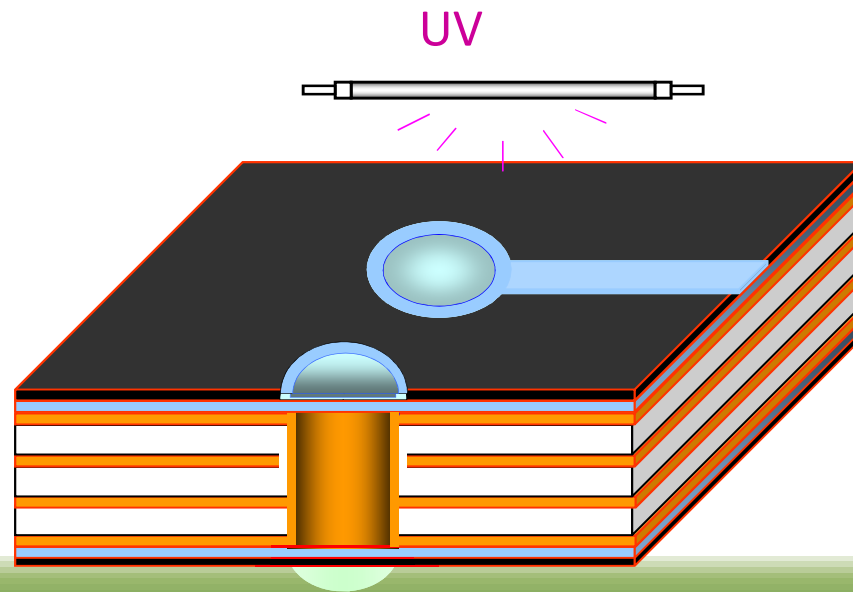
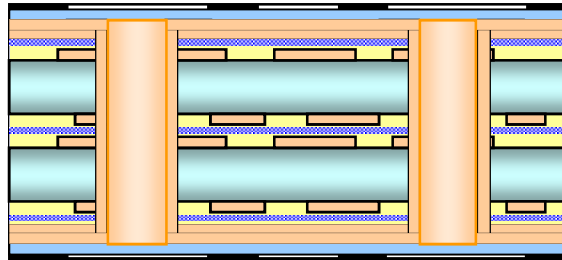
## 15. Belt Sanding → Option



## 16. Dry Film Lamination (Outer layer)

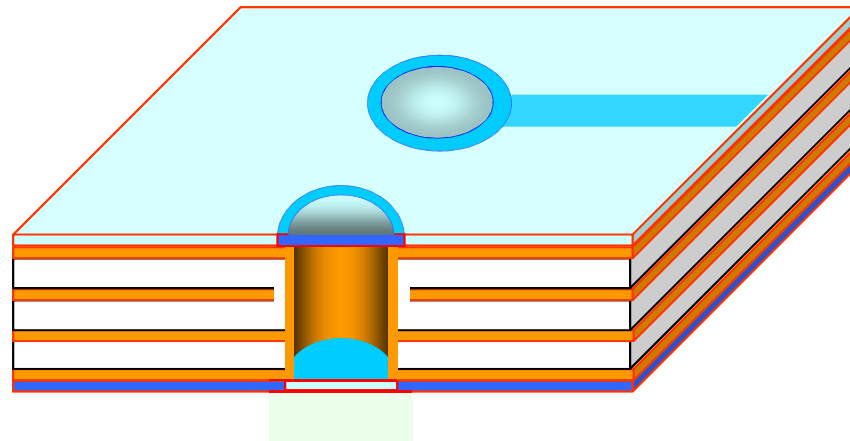
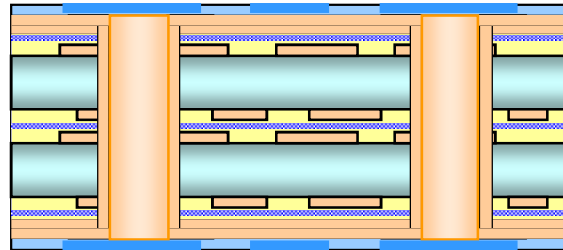


## 17. Outerlayer Expose

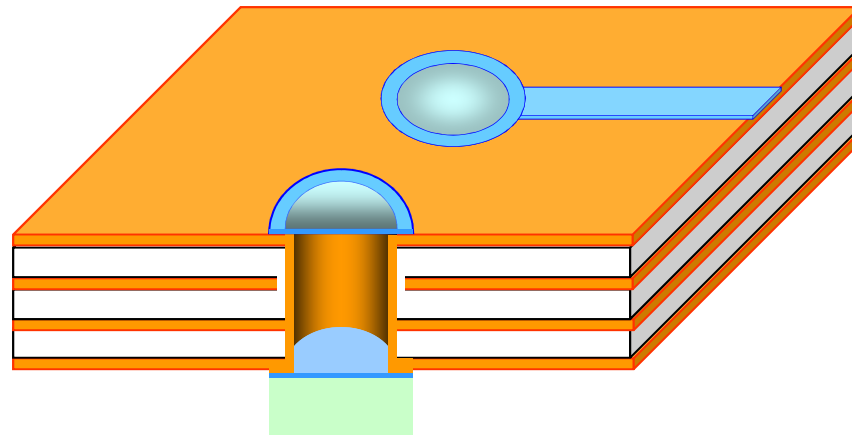
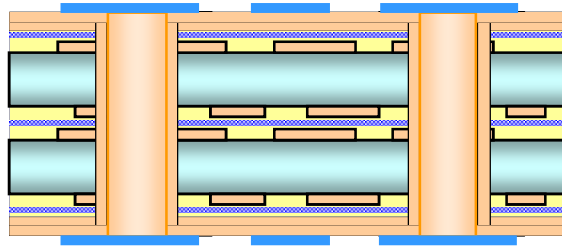




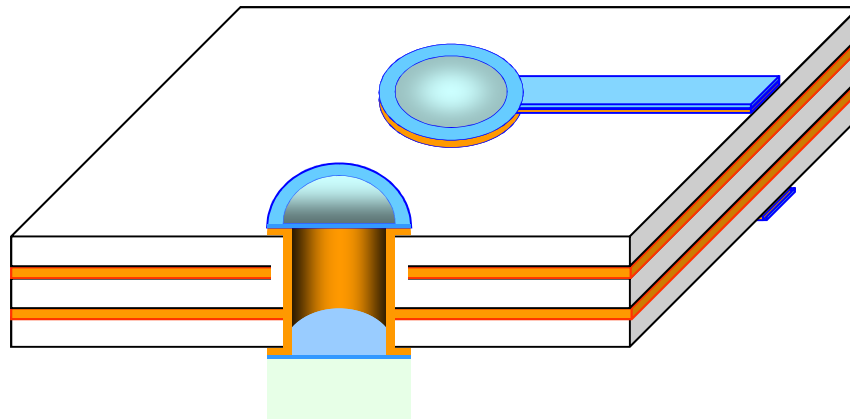
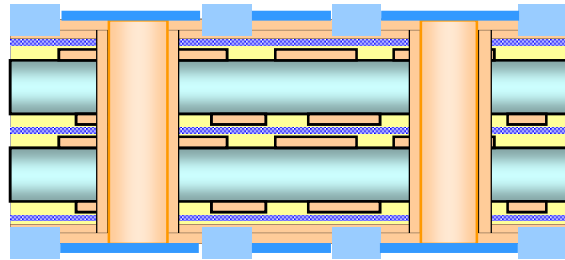
## 18. After Exposed



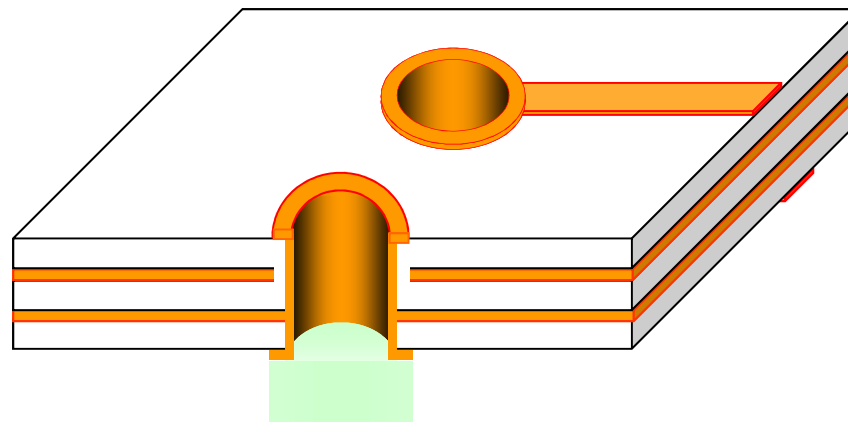
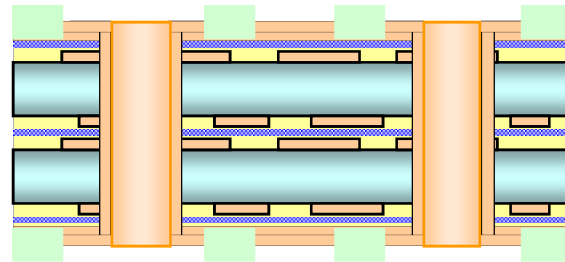
## 19. Outerlayer Develop



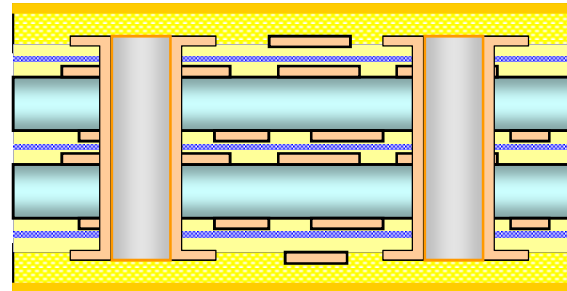
## 20. Etch



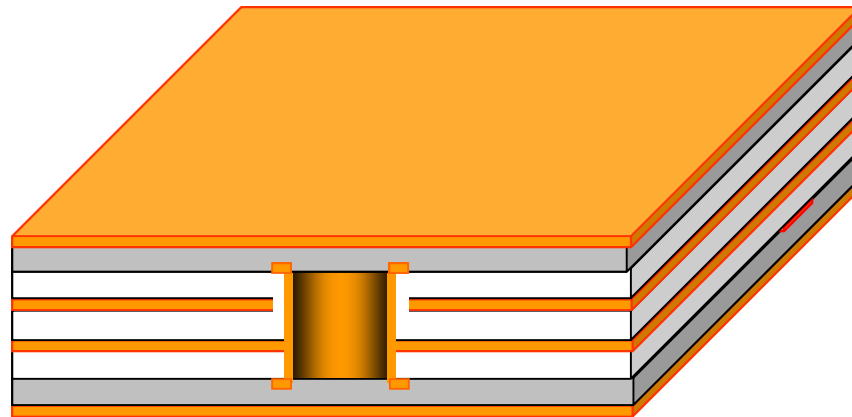
## 20. Strip Resist



## 21. Build-up Layer Lamination

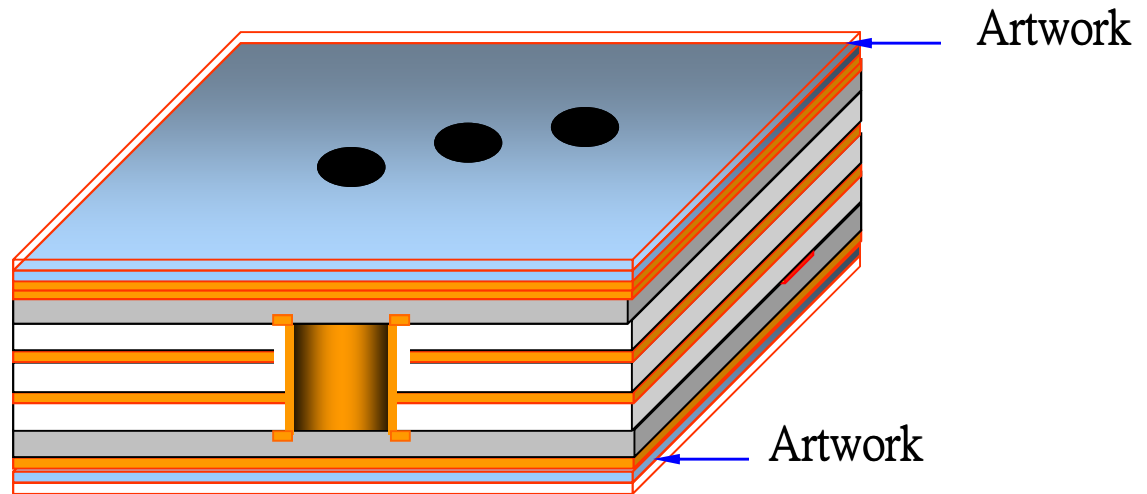


RCC  
(Resin Coated Copper  
foil)

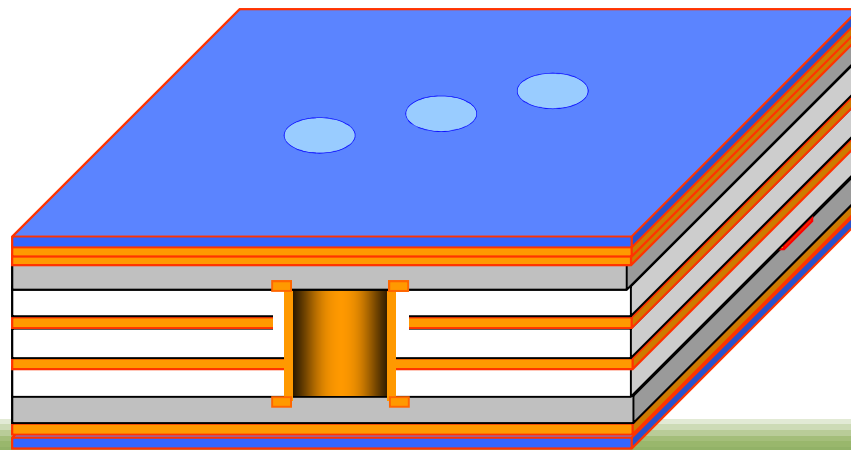


## 22. Conformal Mask

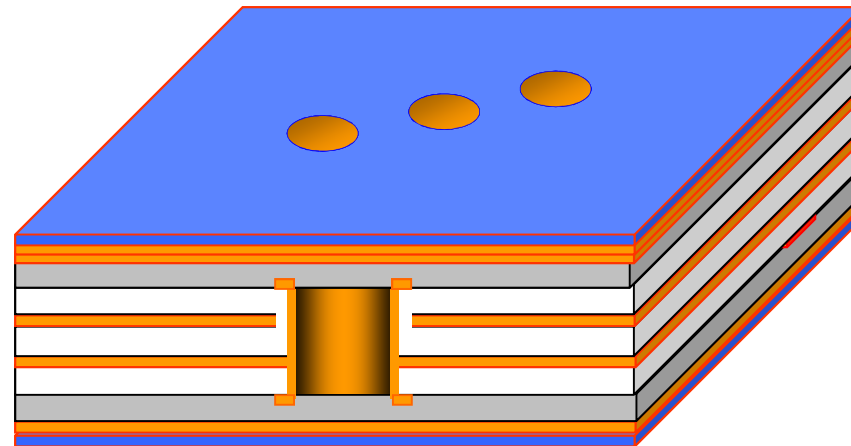
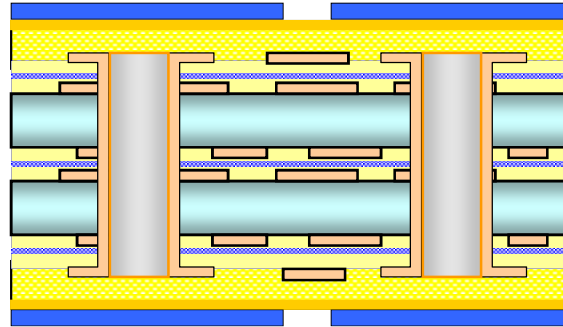
Before Exposure



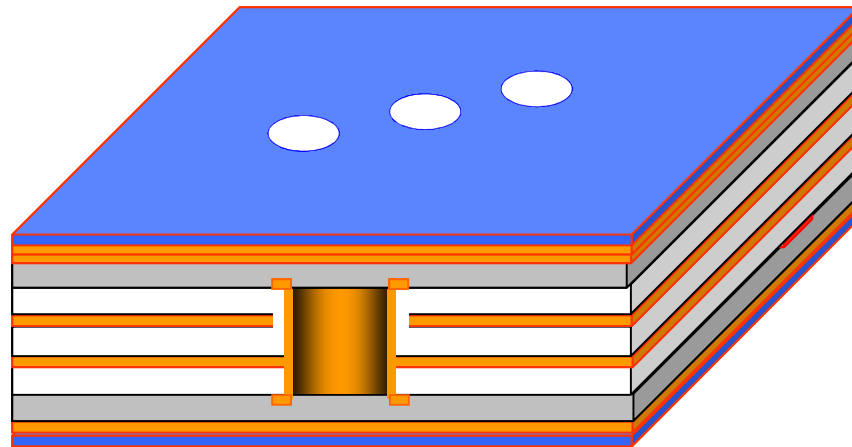
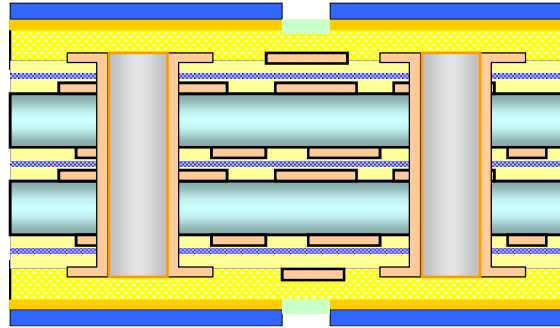
After Exposure



## 23. Conformal Mask

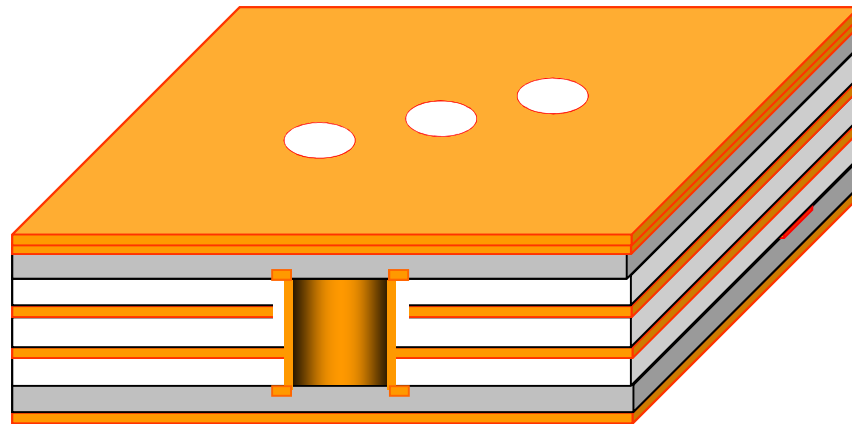
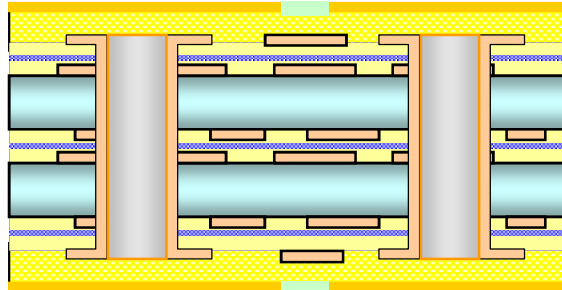


## 24. Conformal Mask (for Etching)

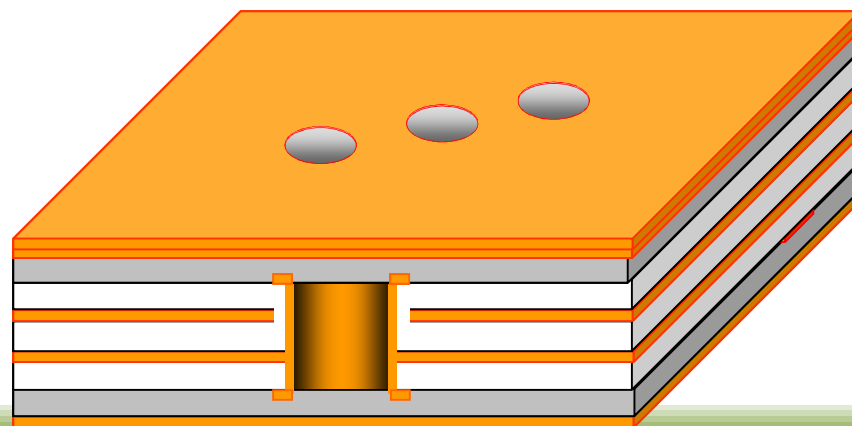
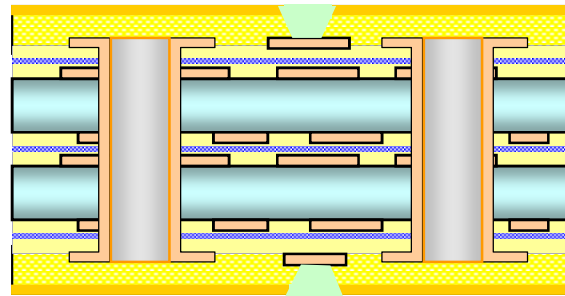




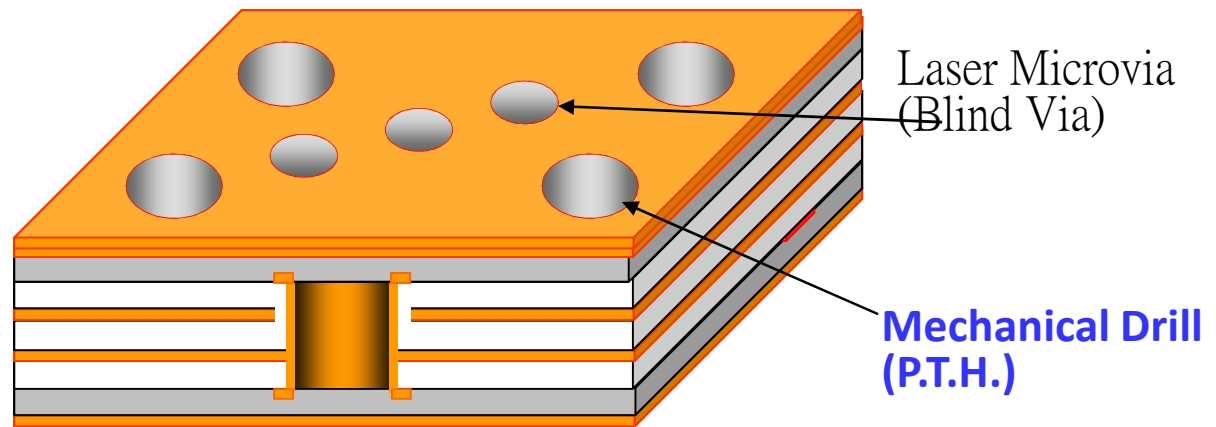
## 25. Conformal Mask



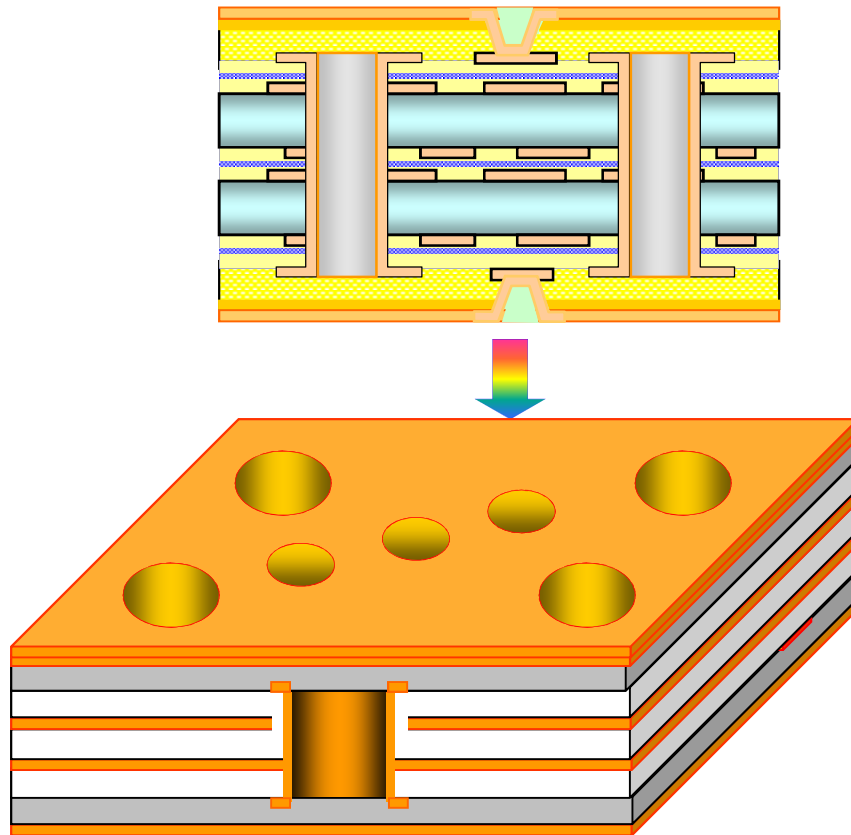
## 26. Laser Ablation and NC Drilling



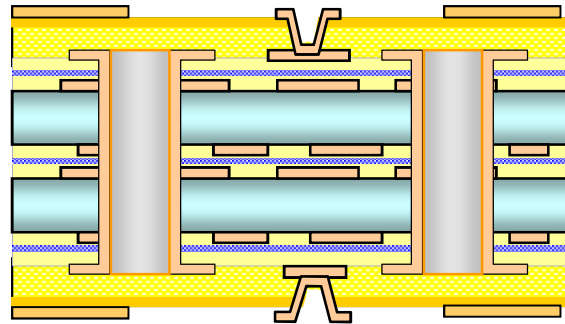
## 27. Mechanical Drill



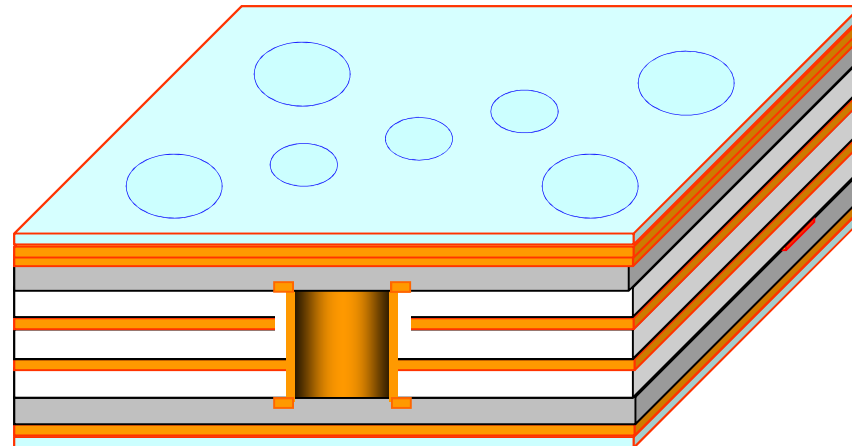
## 28. Desmear & Copper Deposition



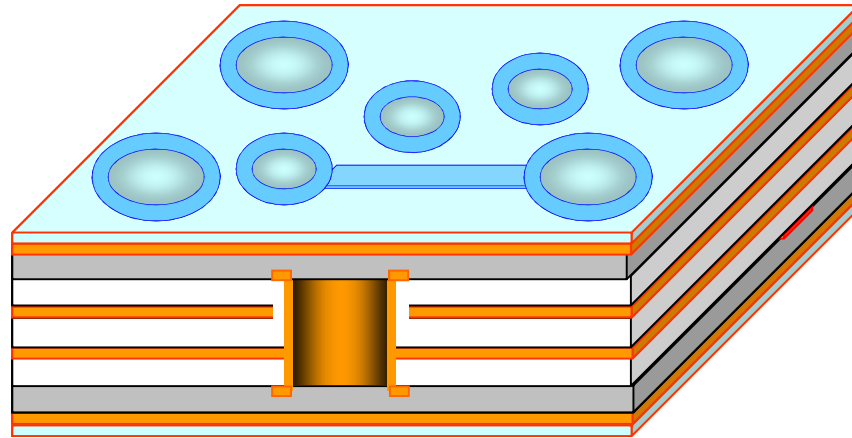
## 29. Outerlayer Pattern imaging)



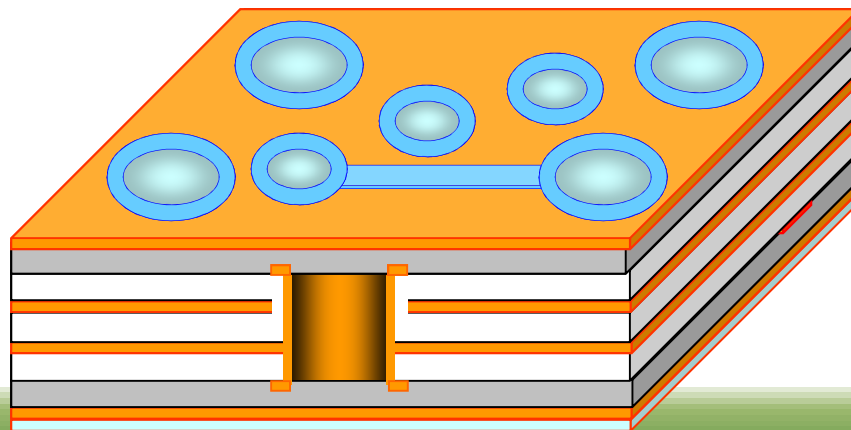
## Dry Film Lamination)



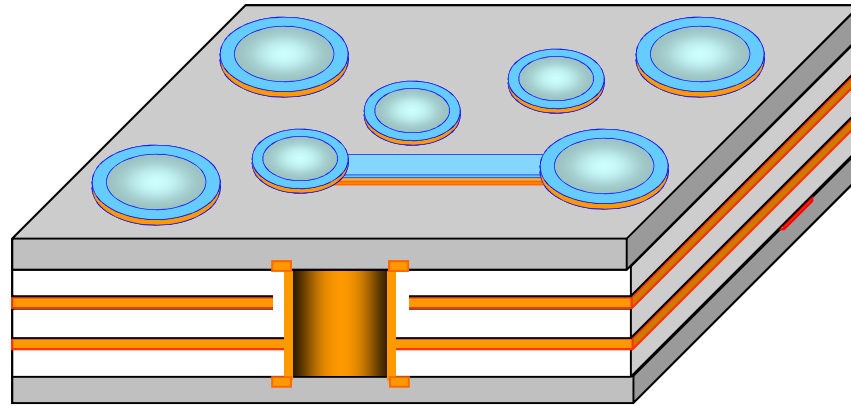
## Outerlayer Exposure



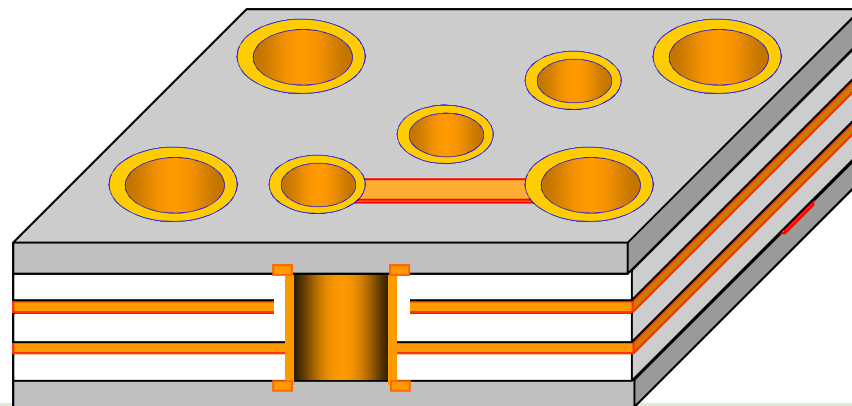
## Dry Film Developing



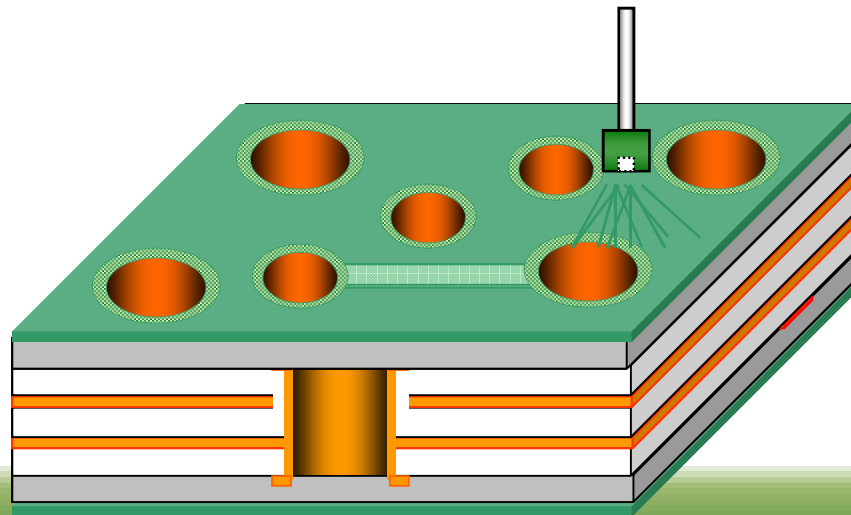
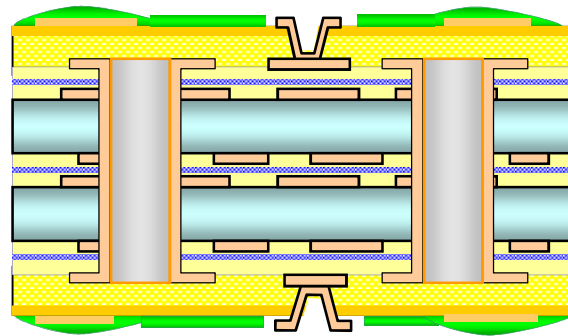
## Etching



## Dry Film Stripping

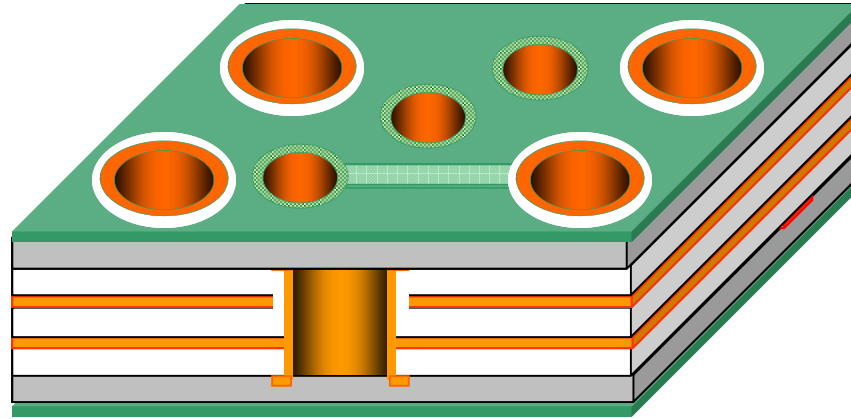


## 30. Solder Mask Process

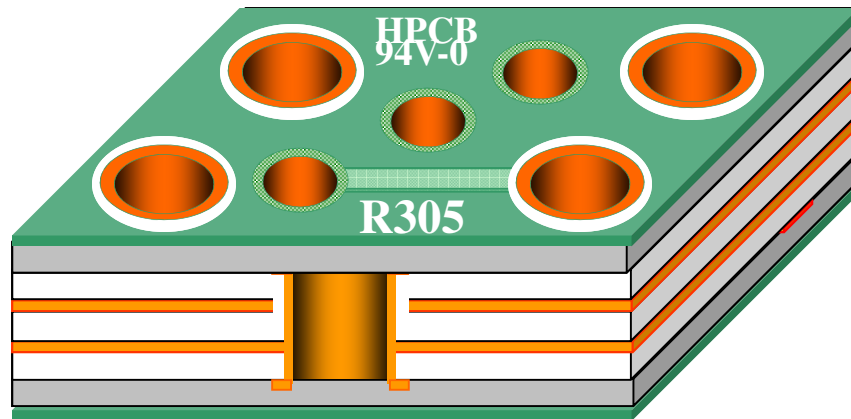




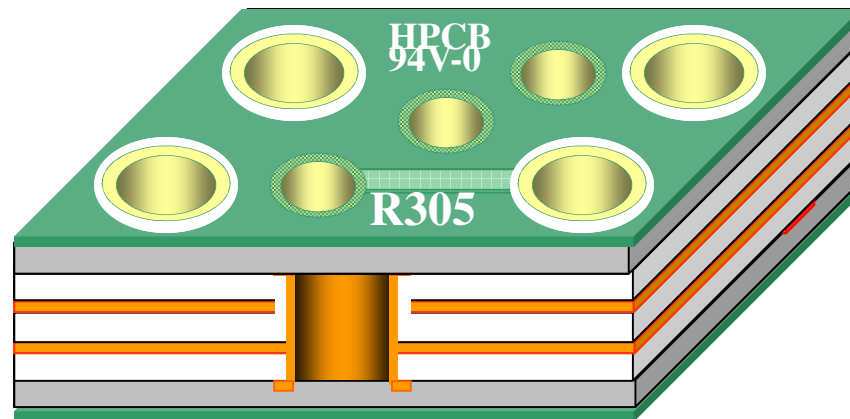
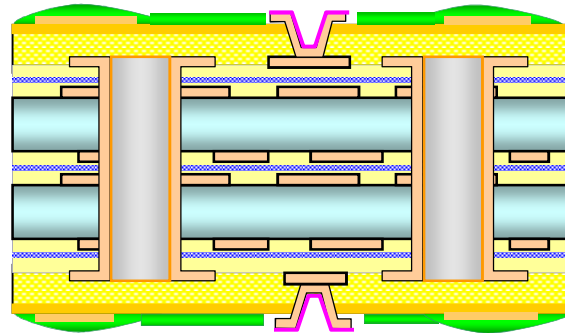
## 31. S/M Developing



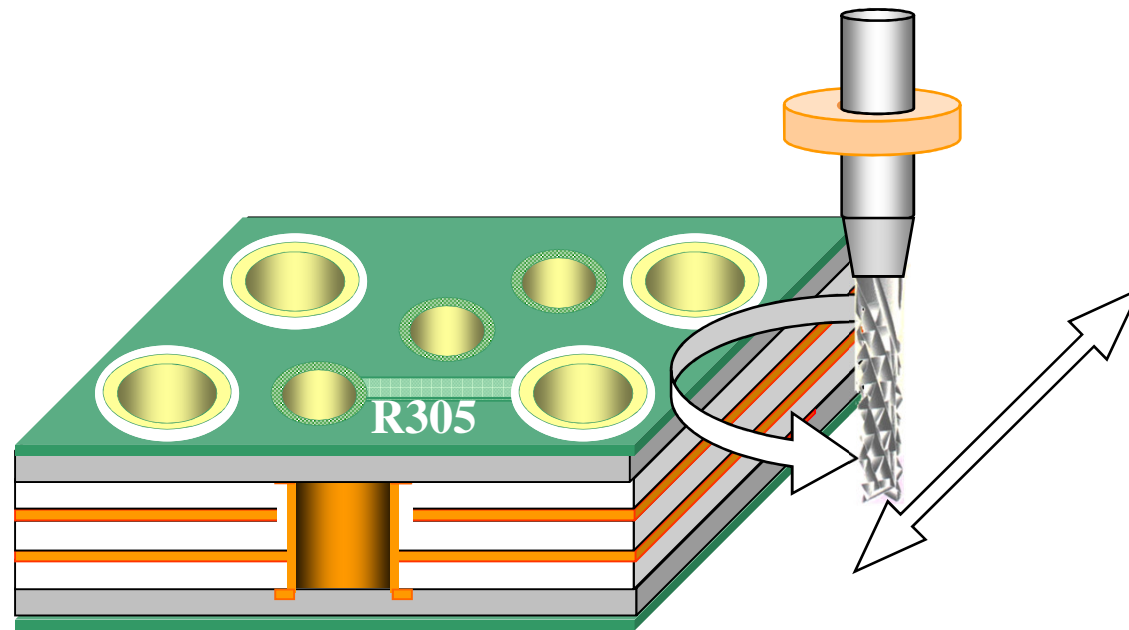
## 32. Legend Printing



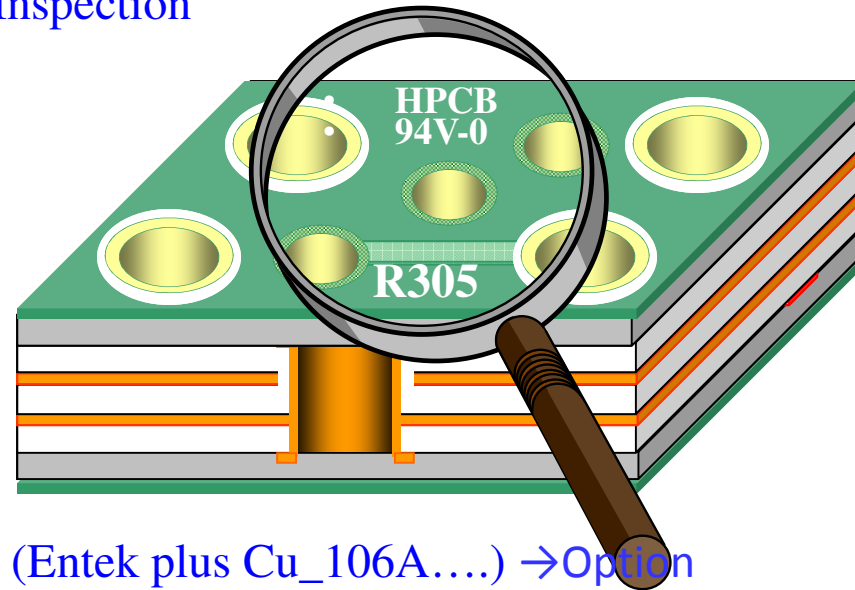
## 33. Electroless Ni/Au , HAL\_lead free and Etc.



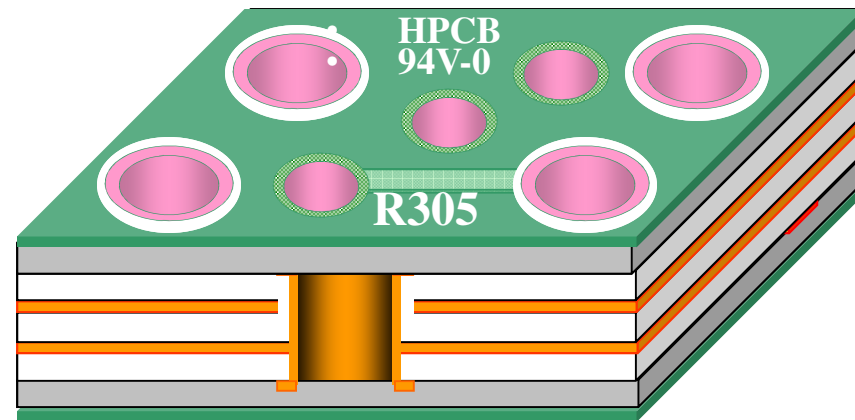
## 34. Outline Profile and Electrical Testing



## 36. Final Inspection

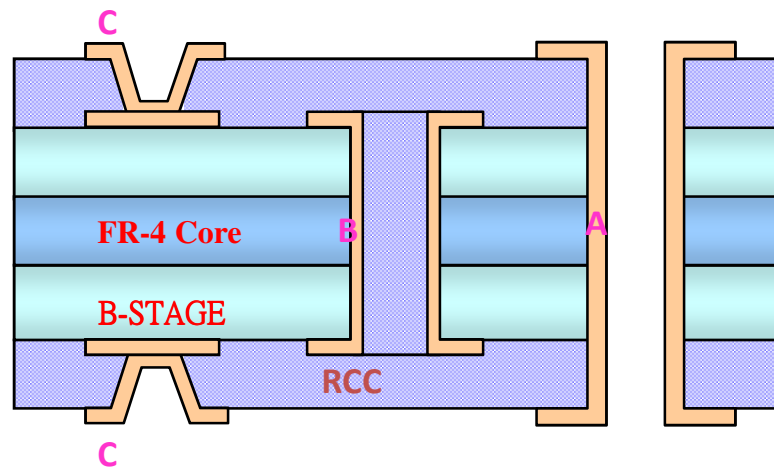


## 37. O.S.P. (Entek plus Cu\_106A....) →Option

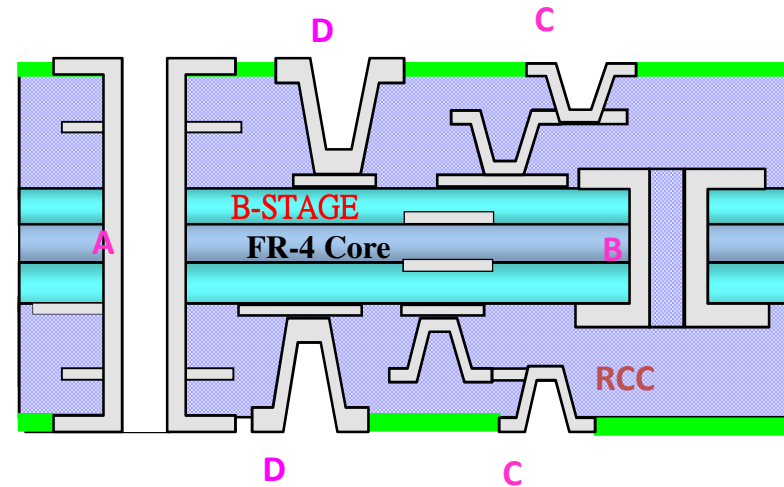


## BURIED VIA AND LASER BLIND VIA OPTION

- A = THROUGH VIA HOLE
- B = BURIED VIA HOLE
- C = One Level Laser Blind Via
- D = Two Level Laser Via



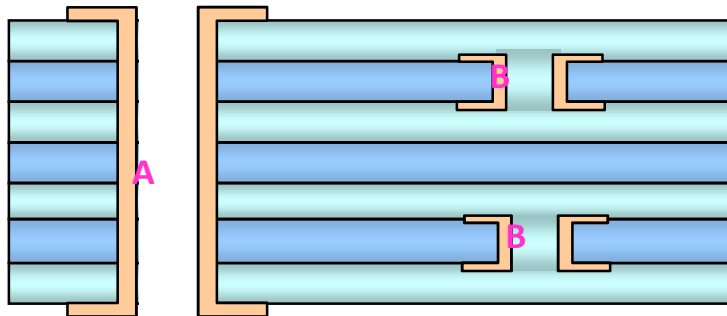
LASER BLIND & BURIED VIA LAY-UP



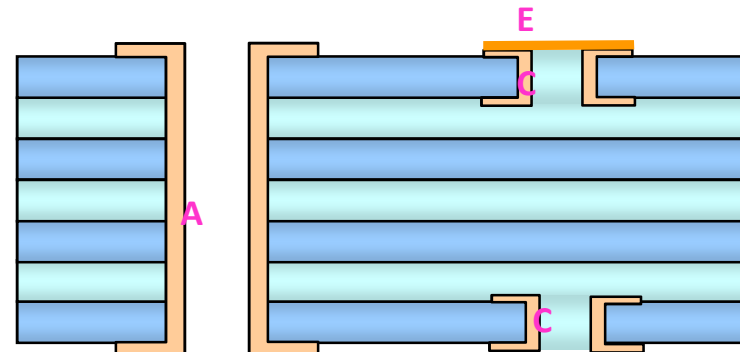
LASER BLIND & BURIED VIA LAY-UP

## BLIND AND BURIED VIA OPTION

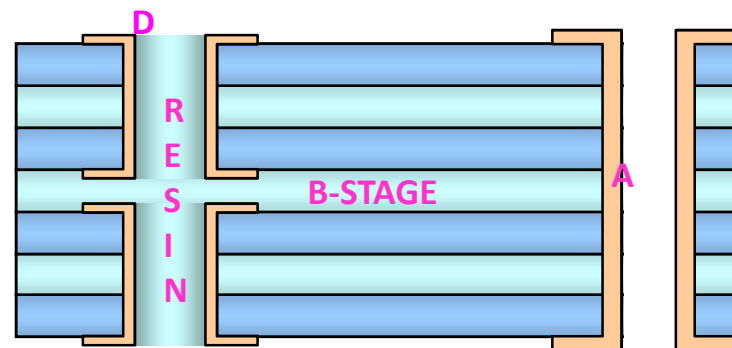
- A = THROUGH VIA HOLE
- B = BURIED VIA HOLE
- C = BLIND VIA HOLE
- D = BLIND HOLE MLB VIA



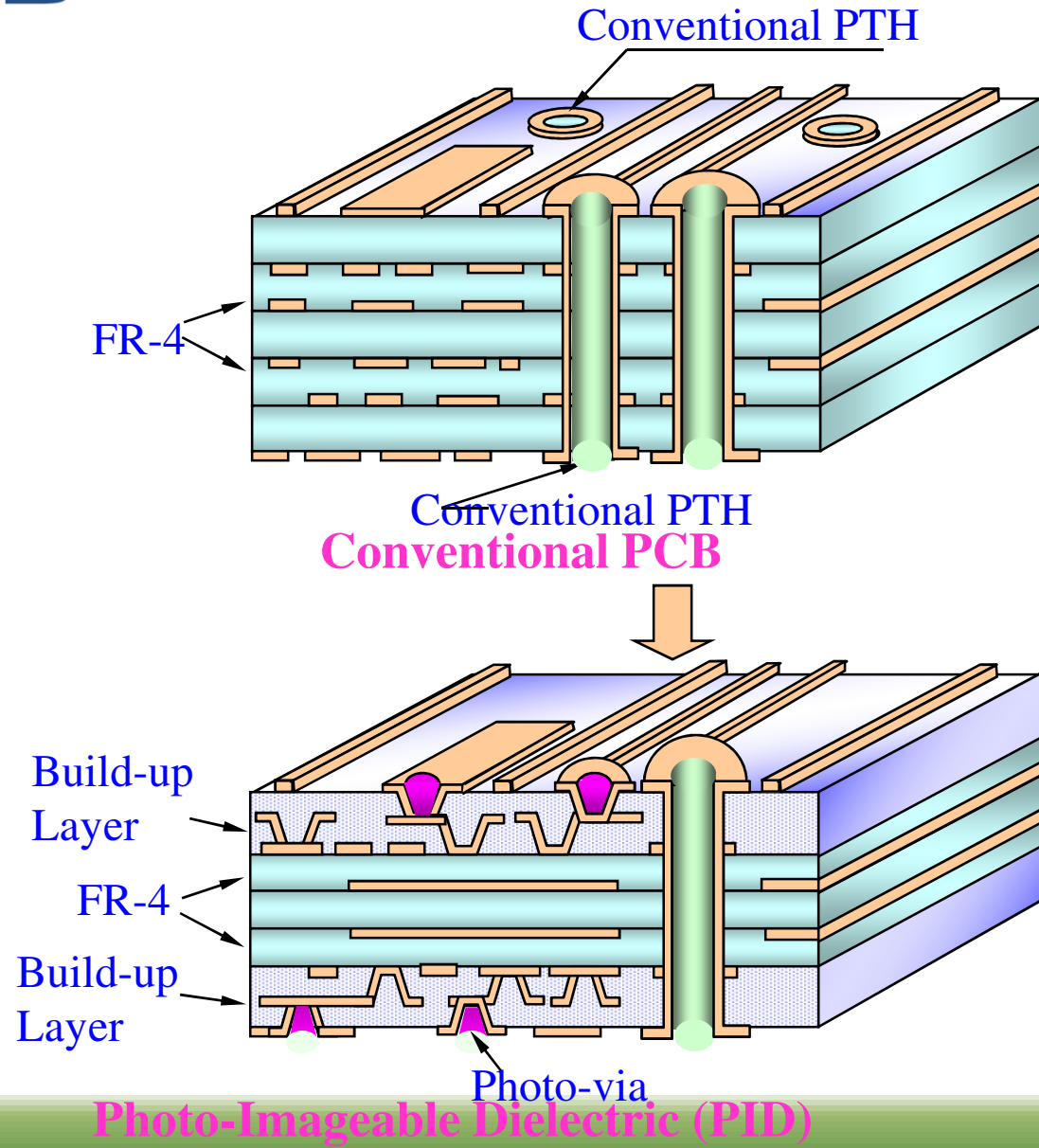
BURIED VIA LAY-UP

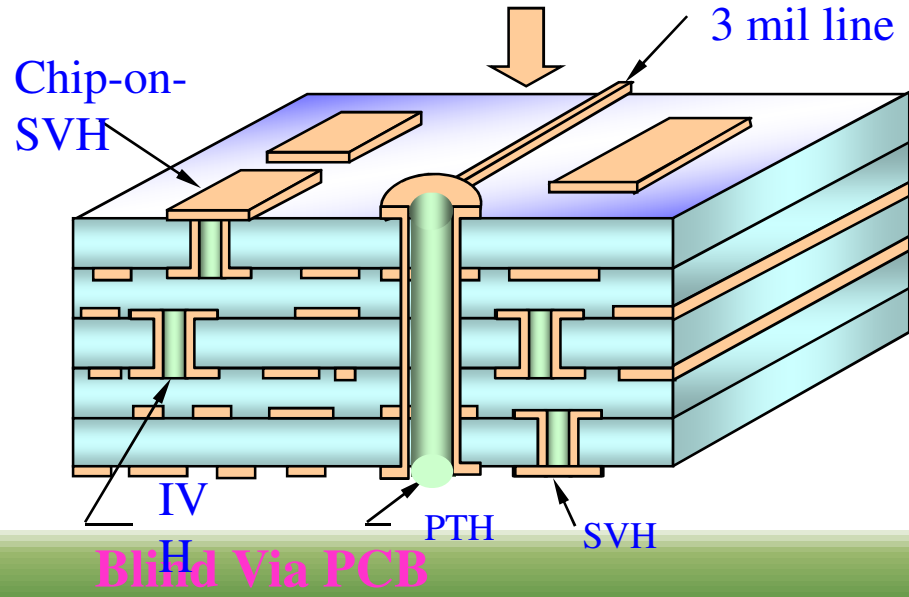
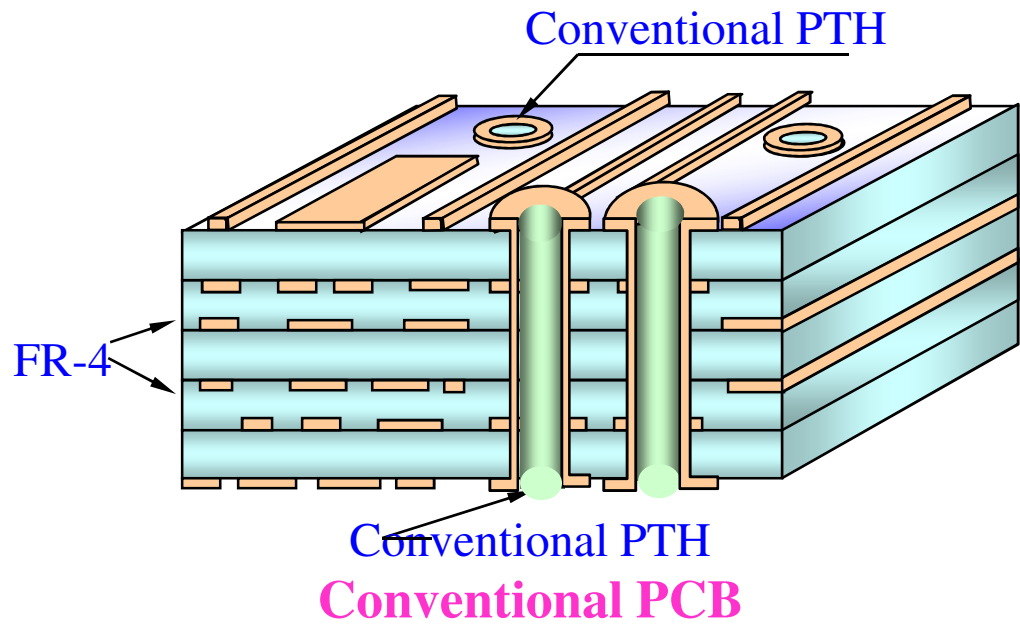


BLIND VIA LAY-UP



BLIND VIA SEQUENTIAL LAY-UP







End

