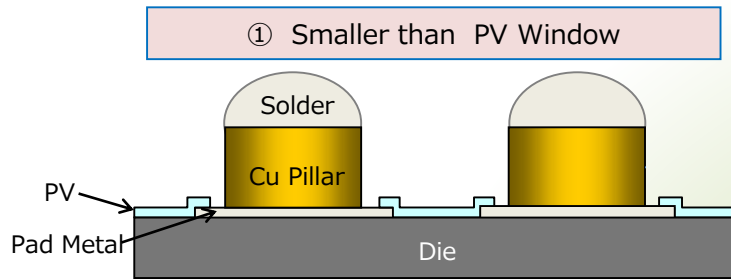


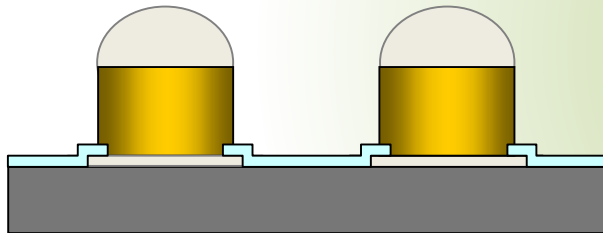
# Cu Pillar Design Guide

## Cu Pillar on Pad (Cu Pillar Direct on Pad)

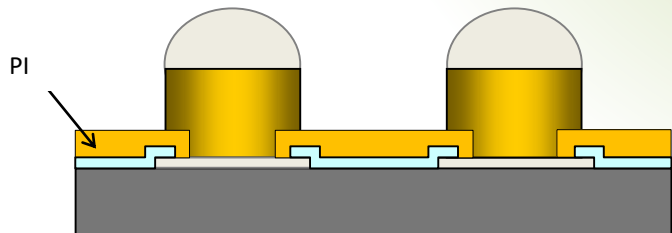


\* PV :  
Passivation

### ② Larger than PV Window



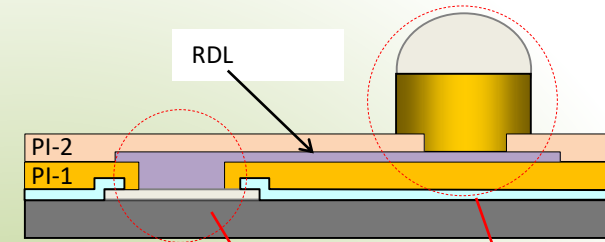
### ③ Larger than PV&PI Window



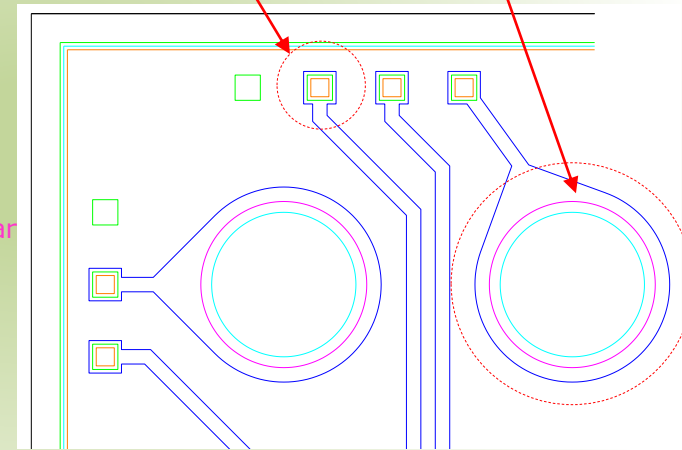
\* PI : Polyimide Insulation

## Cu Pillar with RDL (Cu Pillar with RDL)

### ④ 2 Layer PI with RDL

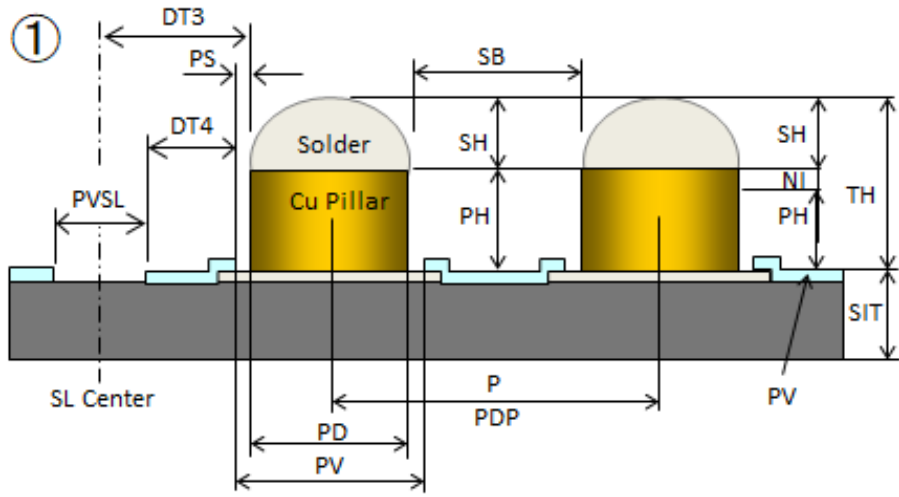


PV  
PI-1  
RDL  
PI-2  
Cu Pillar



Items	6" , 8" Wafer	12" Wafer
Cu Pillar on Pad	Available	Available
Cu Pillar with RDL	8" available, 6" Further discussion needed	Further discussion needed
Pillar Structure	Cu + ( Ni + ) Sn-Ag	Cu + ( Ni + ) Sn-Ag
Seed Layer Materials	Ti+Cu	Ti+Cu
Solder Bump Materials	Sn-2.5Ag	Sn-2.3Ag
Wafer Edge outside Effective Area	4mm	3mm (4mm Depend on spec)

# Cu Pillar Design Guide



(Cu Pillar Size Example Table)

Wafer Size	Cu Pillar Pitch P	Cu Pillar Diameter PD	Pillar Space SB	Solder Height SH (max=PD/2)	Cu Height PH	Pillar Total Height TH (max)
6" , 8"	<b>75</b>	<b>40</b>	<b>35</b>	<b>20.0</b>	<b>35.0</b>	<b>55.0</b>
	80	40	40	20.0	35.0	55.0
	90	45	45	22.0	35.0	57.0
	100	50	50	25.0	58.0	83.0
	150	75	75	37.0	50.0	87.0
	200	100	100	50.0	86.0	136.0
12"	<b>75</b>	<b>40</b>	<b>35</b>	<b>20.0</b>	<b>25.0</b>	<b>45.0</b>
	80	40	40	20.0	25.0	45.0
	90	45	45	22.0	25.0	47.0
	100	50	50	25.0	23.0	48.0
	150	75	75	37.0	15.0	52.0
	200	100	100	46.0	10.0	56.0

※Example Case of : PD(typ)≐P/2 , SH≐max

※The detailed design will be in consultation with the customer.

※ For P<75 , PD<40, need OEL Confirmation