

| SUBSTRATE         |                 | LOADING/CHUCK         | STEPPER              | WAFER                 | TARGET THICKNESS           | COMMENT    |                            |                           |                            |                            |
|-------------------|-----------------|-----------------------|----------------------|-----------------------|----------------------------|------------|----------------------------|---------------------------|----------------------------|----------------------------|
| Substrate size    | CHUCK name      | Substrate Thickness=S | Pick right chuck     | Shim                  | chuck size                 | wafer size | Chuck thickness=C          | C+S=6.121mm (+/- 0.100)   |                            |                            |
| 1/4 of 2" or less | SMALL 1/4 of 2" | 300um=0.300mm         | 1/4 of 2"+pink shim  | 400um                 | 3 (for ≤3" substrate)      | 50.8mm     | 5.804mm                    | 5.804+0.300=6.104mm       | OK                         |                            |
|                   |                 | 350um=0.350mm         | 1/4 of 2"+pink shim  | 400um                 | 3 (for ≤3" substrate)      | 50.8mm     | 5.804mm                    | 5.804+0.350=6.154mm       | OK                         |                            |
|                   |                 | 420um=0.420mm         | 1/4 of 2"+pink shim  | 400um                 | 3 (for ≤3" substrate)      | 50.8mm     | 5.804mm                    | 5.804+0.420=6.224mm       | OK                         | limit                      |
|                   |                 | 350um=0.350mm         | 1/4 of 2"+metal shim | 380um                 | 3 (for ≤3" substrate)      | 50.8mm     | 5.404mm                    | 5.404+0.380+0.350=6.134mm | OK                         | ≤350um, use shim 260-380um |
|                   |                 | 500um=0.500mm         | 1/4 of 2"+metal shim | 230um                 | 3 (for ≤3" substrate)      | 50.8mm     | 5.404mm                    | 5.404+0.500+0.230=6.134mm | OK                         | ≥500um use shim 230-260um  |
|                   |                 | 620um=620mm           | 1/4 of 2"            | no                    | 3 (for ≤3" substrate)      | 50.8mm     | 5.404mm                    | 5.404+0.620=6.024mm       | OK                         | limit                      |
|                   |                 | 820um=820mm           | 1/4 of 2"            | no                    | 3 (for ≤3" substrate)      | 50.8mm     | 5.404mm                    | 5.404+0.820=6.224mm       | OK                         | limit                      |
|                   |                 | 2"                    | SMALL 2"             | 300um=0.300mm         | 2"/500um+shim              | 230um      | 3 (for ≤3" substrate)      | 50.8mm                    | 5.525mm                    | 5.525+0.300+0.230=6.055mm  |
| 300um=0.300mm     | 2"/500um+shim   | 240um                 |                      | 3 (for ≤3" substrate) | 50.8mm                     | 5.525mm    | 5.525+0.300+0.240=6.065mm  | OK                        |                            |                            |
| 300um=0.300mm     | 2"/500um+shim   | 260um                 |                      | 3 (for ≤3" substrate) | 50.8mm                     | 5.525mm    | 5.525+0.300+0.260=6.085mm  | OK                        |                            |                            |
| 300um=0.300mm     | 2"/500um+shim   | 380um                 |                      | 3 (for ≤3" substrate) | 50.8mm                     | 5.525mm    | 5.525+0.300+0.380=6.205mm  | OK                        | limit                      |                            |
| 350um=0.350mm     | 2"/500um+shim   | 230um                 |                      | 3 (for ≤3" substrate) | 50.8mm                     | 5.525mm    | 5.525+0.350+0.230=6.105mm  | OK                        | <350um, use shim 230-260um |                            |
| 500um=0.500mm     | 2"/500um        | no                    |                      | 3 (for ≤3" substrate) | 50.8mm                     | 5.525mm    | 5.525+0.500=6.025mm        | OK                        | limit                      |                            |
| 635um=0.630mm     | 2"/500um        | no                    |                      | 3 (for ≤3" substrate) | 50.8mm                     | 5.525mm    | 5.525+0.635=6.160mm        | OK                        |                            |                            |
| 700um=0.700mm     | 2"/500um        | no                    |                      | 3 (for ≤3" substrate) | 50.8mm                     | 5.525mm    | 5.525+0.700=6.225mm        | OK                        | limit                      |                            |
| 3"                | METAL 3"        | 300um=0.300mm         | 76mm/635um+shim      | 380um                 | 3 (for ≤3" substrate)      | 76.2mm     | 5.436mm                    | 5.436+0.300+0.380=6.116mm | OK                         |                            |
|                   |                 | 350um=0.350mm         | 76mm/635um+shim      | 380um                 | 3 (for ≤3" substrate)      | 76.2mm     | 5.436mm                    | 5.436+0.350+0.380=6.166mm | OK                         | ≤350um, use shim 380um     |
|                   |                 | 500um=0.500mm         | 76mm/635um+shim      | 230um                 | 3 (for ≤3" substrate)      | 76.2mm     | 5.436mm                    | 5.436+0.500+0.230=6.166mm | OK                         |                            |
|                   |                 | 500um=0.500mm         | 76mm/635um+shim      | 240um                 | 3 (for ≤3" substrate)      | 76.2mm     | 5.436mm                    | 5.436+0.500+0.240=6.176mm | OK                         |                            |
|                   |                 | 500um=0.500mm         | 76mm/635um+shim      | 260um                 | 3 (for ≤3" substrate)      | 76.2mm     | 5.436mm                    | 5.436+0.500+0.260=6.196mm | OK                         |                            |
|                   |                 | 585um=0.720mm         | 76mm/635um           | no                    | 3 (for ≤3" substrate)      | 76.2mm     | 5.436mm                    | 5.436+0.585=6.021mm       | OK                         | limit                      |
|                   |                 | 635um=0.635mm         | 76mm/635um           | no                    | 3 (for ≤3" substrate)      | 76.2mm     | 5.436mm                    | 5.436+0.635=6.071mm       | OK                         |                            |
|                   |                 | 785um=0.720mm         | 76mm/635um           | no                    | 3 (for ≤3" substrate)      | 76.2mm     | 5.436mm                    | 5.436+0.785=6.221mm       | OK                         | limit                      |
| 4"                | STANDARD        | 300um=0.300mm         | 4"/500um+shim        | 230um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.300+0.230=6.131mm | OK                         | ≤350um, use shim 230-260um |
|                   |                 | 300um=0.300mm         | 4"/500um+shim        | 240um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.300+0.240=6.141mm | OK                         |                            |
|                   |                 | 300um=0.300mm         | 4"/500um+shim        | 260um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.300+0.260=6.161mm | OK                         |                            |
|                   |                 | 300um=0.300mm         | 4"/500um+shim        | 380um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.300+0.380=6.281mm | NO                         |                            |
|                   |                 | 350um=0.350mm         | 4"/500um+shim        | 230um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.350+0.230=6.181mm | OK                         |                            |
|                   |                 | 350um=0.350mm         | 4"/500um+shim        | 240um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.350+0.240=6.191mm | OK                         |                            |
|                   |                 | 350um=0.350mm         | 4"/500um+shim        | 260um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.350+0.260=6.211mm | OK                         | limit                      |
|                   |                 | 350um=0.300mm         | 4"/500um+shim        | 380um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.350+0.380=6.331mm | NO                         |                            |
|                   |                 | 420um=0.620mm         | 4"/500um             | no                    | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.420=6.021mm       | OK                         | limit                      |
|                   |                 | 500um=0.500mm         | 4"/500um             | no                    | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.500=6.101mm       | OK                         |                            |
|                   |                 | 620um=0.620mm         | 4"/500um             | no                    | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.620=6.221mm       | OK                         | limit                      |
|                   |                 | 4"                    | METAL 4"             | 300um=0.300mm         | 4"/300um+shim              | 230um      | 100 ( for 4", metal chuck) | 100mm                     | 5.601mm                    | 5.601+0.300+0.230=6.131mm  |
| 300um=0.300mm     | 4"/300um+shim   |                       |                      | 240um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.300+0.240=6.141mm | OK                         |                            |
| 300um=0.300mm     | 4"/300um+shim   |                       |                      | 260um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.300+0.260=6.161mm | OK                         |                            |
| 300um=0.300mm     | 4"/300um+shim   |                       |                      | 380um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.300+0.380=6.281mm | NO                         |                            |
| 350um=0.350mm     | 4"/300um+shim   |                       |                      | 230um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.350+0.230=6.181mm | OK                         |                            |
| 350um=0.350mm     | 4"/300um+shim   |                       |                      | 240um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.350+0.240=6.191mm | OK                         |                            |
| 350um=0.350mm     | 4"/300um+shim   |                       |                      | 260um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.350+0.260=6.211mm | OK                         | limit                      |
| 350um=0.300mm     | 4"/300um+shim   |                       |                      | 380um                 | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.350+0.380=6.331mm | NO                         |                            |
| 500um=0.500mm     | 4"/300um        |                       |                      | no                    | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.500=6.101mm       | OK                         |                            |
| 620um=0.620mm     | 4"/500um        |                       |                      | no                    | 100 ( for 4", metal chuck) | 100mm      | 5.601mm                    | 5.601+0.620=6.221mm       | OK                         | limit                      |
| 6"                |                 | custom puddles        | 3C can make them!    |                       |                            |            |                            |                           |                            |                            |

**Shims:**

- 1.brown, plastic: 240um**
- 2.metal : 220-230um**
- 3.metal: 250-260um**
- 4.metal: 380um**

**Shims are square shape and small size.**

**Reading on voltmeter during exposure( SPR955-0.9 standard recipe) is ~-2.0V.**

**First exposure: -1.90V , last exposure is -1.60V ( system focus test)**

**Material used for cutting shims is in first drawer, bay 6( aytostep 200)**

**Shims: 0.01mm to 0.75mm ( thickness)**