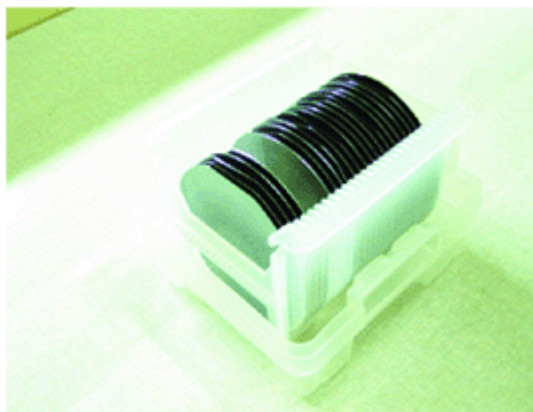
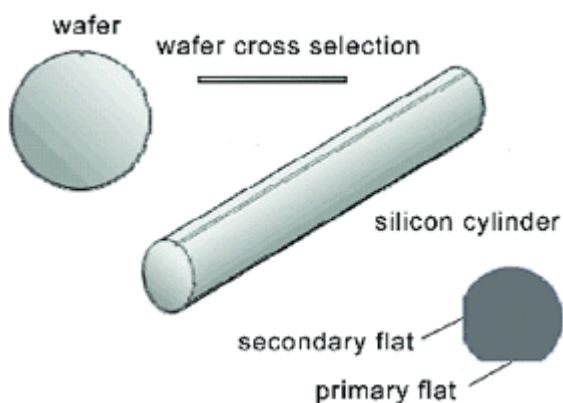


## General Process



## Material Properties

| ITEMS              | Characteristic                      | ASTM Test Method |
|--------------------|-------------------------------------|------------------|
| Type/Dopant        | P, Boron N, Phosphorous N, Antimony | F42              |
| Orientations       | <100>, <111>                        | F26              |
| Resistivity ranges |                                     | F84              |
| - P, Boron         | 0.001 - 50 ohm cm                   |                  |
| - N, Phosphorous   | 0.1 - 40 ohm cm                     |                  |
| - N, Antimony      | 0.005 - 0.025 ohm cm                |                  |
| - N, Arsenic       | < 0.005 ohm cm                      |                  |
| Oxygen Content     | 10-18ppma SEMI-STD or Custom        |                  |
| Carbon Content     | 0.5-1.0 ppma SEMI-STD or Custom     | F1391            |

## Mechanical and Surface Properties

| Parameter                         | Prime              | Monitor /Test A | Test B      | ASTM Method |
|-----------------------------------|--------------------|-----------------|-------------|-------------|
| Diameter                          | 100+/-0.5mm        | 100+/-0.5mm     | 100+/-0.5mm | F613        |
| Thickness (衞)                     | 360+/-13um         | 360+/-13um      | 360+/-13um  | F533        |
| TTV (衞)                           | < 6um              | < 8um           | < 15um      | F657        |
| Bow (衞)                           | < 20um             | < 40um          | < 40um      | F657        |
| Wrap (衞)                          | < 20um             | < 40um          | < 40um      | F657        |
| Contamination, Particles @ >0.3 衞 | <= 10              | <= 30           | <= 30       | F523        |
| Primary/Secondary Flat            | SEMI-STD or Custom |                 |             | F671        |

**CHINA NATIONAL SCIENTIFIC INSTRUMENTS & MATERILAS. CORP**

Salse Office: Suite L, 7F, Mansion No 1, GUO DU Development Building, No.182 Chaohui Road, 310014 Hangzhou P.R.China

TEL: 0086-571-85803723 85803731 85803732

FAX: 0086-571-85803724

E-mail: sales@csimc-freqcontrol.com thwu@mail.hz.zj.cn