

## MBE System Specifications

| Model                                       |   | RC1100                                  | RC2100/RC3100                           | RC6100                                  |        |
|---|---|---|---|---|--------|
| Growth Chamber                              | Ultimate Pressure (Pa)  | $<1.33 \times 10^{-8}$                  | $<1.33 \times 10^{-8}$                  | $<1.33 \times 10^{-8}$                  |        |
|   | Substrate (wafer) size  | 1 × $\phi$ 1"                           | 1 × $\phi$ 2" / 1 × $\phi$ 3"           | 1 × $\phi$ 6"                           |        |
|   | Substrate temperature (T. C. Value for control)               | Standard                                | 900°C                                   | 900°C                                   | 900°C  |
|   |   | Optional                                | 1200°C                                  | 1200°C                                  | 1200°C |
|   | K-Cell ports  | 6 × ICF114                              | 8 × ICF114 / 8 × ICF152                 | 10 × ICF152                             |        |
|   | Beam flux monitor   | Standard                                | Standard                                | Standard                                |        |
|   | Ion Pump  | 270I/sec                                | 500I/sec                                | 500I/sec                                |        |
|   | Turbo Molecular Pump  | Optional                                | Optional                                | Optional                                |        |
|   | Cryo Pump   | Not Available                           | Optional                                | Optional                                |        |
|   | RHEED (30keV)   | Standard                                | Standard                                | Standard                                |        |
| RHEED screen size                           | ICF152  | ICF152/ICF203                           | ICF203                                  |   |        |
| Transfer Chamber (with Transfer Rod)        | Ultimate Pressure (Pa)  | $<1.33 \times 10^{-7}$                  | $<1.33 \times 10^{-7}$                  | $<1.33 \times 10^{-7}$                  |        |
|   | Combination Pump  | 150I/sec                                | 150I/sec                                | 150I/sec                                |        |
|   | Transfer system   | Transfer Rod                            | Transfer Rod                            | Transfer Rod                            |        |
|   | Rail transfer system  | Optional                                | Optional                                | Optional                                |        |
| Transfer Chamber (with arm transfer system) | Ultimate Pressure (Pa)  | $<1.33 \times 10^{-7}$                  | $<1.33 \times 10^{-7}$                  | $<1.33 \times 10^{-7}$                  |        |
|   | Combination Pump  | 300I/sec                                | 300I/sec                                | 300I/sec                                |        |
|   | Transfer system   | Arm transfer system                     | Arm transfer system                     | Arm transfer system                     |        |
|   | Extension ports (amount × size)                               | 2 × ICF152                              | 2 × ICF152                              | 2 × ICF203                              |        |
| Load lock Chamber                           | Ultimate Pressure (Pa)  | $<1.33 \times 10^{-5}$                  | $<1.33 \times 10^{-5}$                  | $<1.33 \times 10^{-5}$                  |        |
|   | Turbo Molecular Pump  | 300I/sec                                | 300I/sec                                | 300I/sec                                |        |
|   | Pre-heating system (Max500°C)                                 | Standard                                | Standard                                | Standard                                |        |
|   | Substrate stock stage (for up to 4 holders)                   | Standard                                | Standard                                | Standard                                |        |
|   | Transfer system<br>Unnecessary in case of arm transfer system | Transfer Rod or<br>Rail transfer system | Transfer Rod or<br>Rail transfer system | Transfer Rod or<br>Rail transfer system |        |
| Control system                              | Operation panel   | Standard                                | Standard                                | Standard                                |        |
|   | Alarm system  | Standard                                | Standard                                | Standard                                |        |
|   | Inter lock system   | Standard                                | Standard                                | Standard                                |        |
|   | Automatic Growth system (for shutter)                         | Optional                                | Optional                                | Optional                                |        |
|   | Automatic Growth system (for temperature)                     | Optional                                | Optional                                | Optional                                |        |
| Others                                      | Residual Gas Analyzers  | Optional                                | Optional                                | Optional                                |        |