

MOCVD system

Features of EpiQuest's MOCVD system

SV2001/SV3001/SV4001 (SV2003)



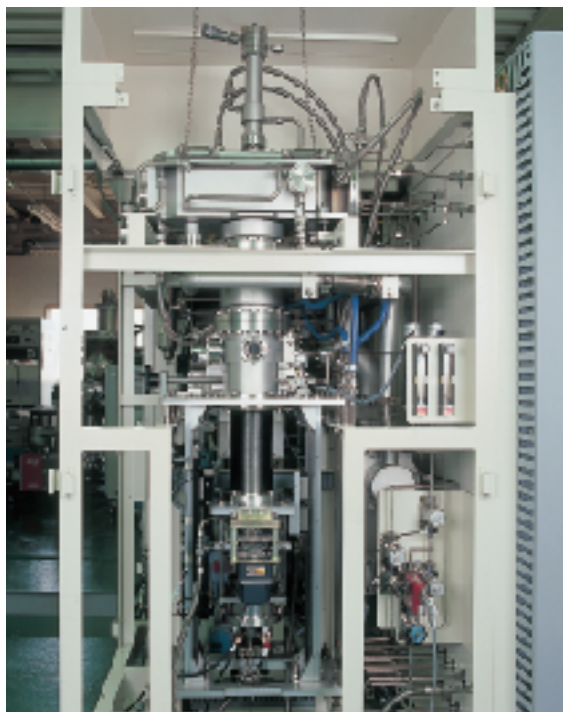
Features

SV series adopts a vertical quartz reactor designed to the optimal level based on our outstanding simulation technology and years of experience. For GaAs series and InP series materials, this reactor is the best selling item for more than 20 years. Since it is a single-leaf machine, it shows superior uniformity, repeatability and steepness in its products, which cannot be achieved by multiple-leaf machines. We have a great number of proven deliveries for production facilities as well as for research purposes.

Specifications

- Reactor : Vertical type, Made of quartz
- Substrate size : 1 × φ 2" (SV2001)
1 × φ 3" (SV3001)
1 × φ 4" (SV4001)
(3 × φ 2" (SV2003))
- Substrate heating : Resistance heating type
- Maximum heating temperature : 900°C (T.C. Value for control)
- Applications : GaAs, GaInNAs, InP etc.

SH2001/SH3001/SH4001 (SH2003)



Features

SH series adopts a horizontal stainless steel reactor specifically developed for the nitride semiconductor. Manufactured products have outstanding uniformity owing to the optimization of internal quartz flow channel, designed by the simulation technology. We have abundant track record in materials for GaN and AlGaIn for research and development.

Specifications

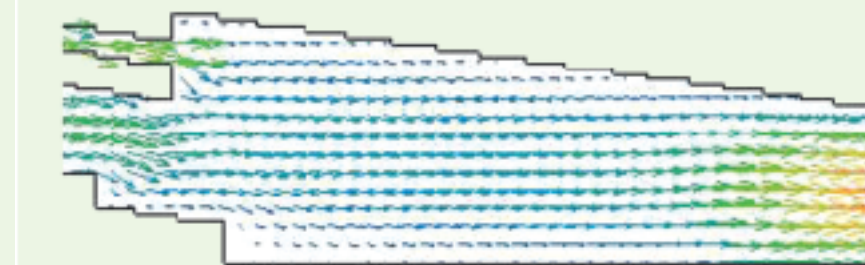
- Reactor : Horizontal type,
Made of stainless steel
- Substrate size : 1 × φ 2" (SH2001)
1 × φ 3" (SH3001)
1 × φ 4" (SH4001)
(3 × φ 2" (SH2003))
- Substrate heating : Resistance heating type
- Maximum heating temperature : 1300°C (T.C. Value for control)
- Applications : GaN, AlGaIn, InGaIn, etc.

MOCVD system for GaN, supplied to Mie University

Optimized reactor shape

The pattern of gas flow in the reactor greatly impacts epitaxial growth. We optimize the shape of reactor using a computerized gas flow simulation technology.

Examples of gas flow analysis results for horizontal MOCVD system



Flow rate vector

Resistance heating system

To manufacture thin epitaxial films of high quality and uniformity, we need a heating mechanism with superior uniformity of temperature on the substrate surface. To achieve this mechanism, we have adopted a resistance heating system in which our know-how has been accumulated for years.

- Users may select any desired shape for susceptor that meets the gas flow pattern.
- Simplified layout around the reactor, ensuring easy reactor maintenance
- Higher heating efficiency than other heating systems

Excellent control system

A compact and reliable control system is used. It is easy to create and execute a recipe for automatic growth program on the Windows™ screen with the standardly equipped automatic growth system.

