SENTECH plasma systems for etching and deposition for

- Optoelectronics
- Microoptics
- MEMS
- Microelectronics
- Photovoltaics

ICP-RIE plasma etcher
RIE plasma etcher
ICPECVD deposition system
PECVD deposition system
Plasma etching

ICP-RIE plasma etcher
SI 500
Especially suited for etching of semiconductors, dielectrics, and metals
• Low damage, high rate, high aspect ratio
• Fast gas replacement
• Nanostructuring
• Planar triple spiral antenna ICP source
• Dynamic temperature control
• Wafer backside temperature measurement
• Cryogenic electrode
• Integrated gas box
• Endpoint monitors (OES, laser)
• Remote servicing
• Small footprint
• SENTECH plasma software

RIE plasma etcher
Etchlab 200, SI 591
Especially suited for metals, semiconductors, and dielectrics
• Direct load or loadlock operation
• Capacitively coupled plasma source with shower head
• Etchlab 200 lowest cost and best performance
• Integrated gas box
• Electrode with He backside cooling
• Endpoint monitors (OES, laser)
• Compact etchers with small footprint
• Remote servicing
• SENTECH plasma software
Plasma deposition

ICPECVD plasma deposition system
SI 500 D

Deposition of dielectric films, SiC, amorphous silicon, TEOS
- Low temperature, low damage, high rate film deposition
- Stress control
- Surface passivation
- Planar triple spiral antenna ICP source
- Dynamic temperature control
- Integrated gas box
- Endpoint monitors (OES, laser)
- Remote servicing
- Small footprint
- SENSECH plasma software

PECVD plasma deposition system
Depolab 200, SI 500 PPD

Deposition of dielectric films, SiC, amorphous silicon, TEOS
- Direct load and loadlock operation
- Capacitively coupled plasma source with shower head
- Depolab 200 lowest costs and best performance
- Low frequency mixing for stress control
- Integrated gas box
- Endpoint monitors (OES, laser)
- Remote servicing
- Small footprint
- SENSECH plasma software
Summary

Application laboratories are provided at SENTECH headquarter and at different research institutes. At these locations, samples can be processed under optimal conditions. Each system can be demonstrated in operation. SENTECH has established an application network with universities and institutes offering access to leading edge technologies and processes for all our customers.

SENTECH’s plasma process equipment is manufactured under clean room conditions. Short assembling time, high throughput and clean environment are features that our customers appreciate.

SENTECH offers worldwide service supported by well-trained engineers in local markets. Short response time, qualified technical support, and high reliability are key features of SENTECH’s international service team.

<table>
<thead>
<tr>
<th>Plasma system</th>
<th>Etchlab 200</th>
<th>SI 591</th>
<th>SI 500</th>
<th>SI 500 C</th>
<th>Depolab</th>
<th>SI 500 PPD</th>
<th>SI 500 D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasma method</td>
<td>RIE</td>
<td>RIE</td>
<td>ICP-RIE</td>
<td>ICP-RIE</td>
<td>PECVD</td>
<td>PECVD</td>
<td>ICPECVD</td>
</tr>
</tbody>
</table>

**Process features**

- Process diversity
- Low cost
- Low damage
- Low temperature
- High temperature
- High rate etching
- High rate deposition
- Low pressure

**Main application**

- MEMS, OEMS
- Micro-optics
- Photonic devices
- Electronic devices
- Optoelectronics
- Nano technology
- Photovoltaics

The hooks indicate advantages or most common usages of the plasma systems.