

## PECVD 2" Split Single Zone Tube Furnace with 4 Channels Gas Delivery & Vacuum System (Max. 1200C 10E-3 torr) - PECVD2-4LV







PECVD2-4LV is a compact PE-CVD tube furnace system (Plasma enhanced chemical vapor deposition), which consists of 500W RF plasma source, 2" split tube furnace, 4 channels precision mass flow meter with gas mixing tank, and high quality mechanical pump.

The PE-CVD furnace is an ideal and affordable tool to deposit thin films or grow nano-wire from a gas state (vapor) to a solid state, and benefits:

- **Lower temperature processing compared to conventional CVD.**
- **Film stress can be controlled by high/low frequency mixing techniques.**
- **Control over stoichiometry via process conditions.**
- **Offers a wide range of material deposition, including SiO<sub>x</sub>, SiN<sub>x</sub>, SiO<sub>x</sub>N<sub>y</sub> and Amorphous silicon (a-Si:H) deposition.**

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### Specifications:

<p>Split Tube furnace</p> 	<ul style="list-style-type: none"> <li>• 1200°C Max. working temperature.</li> <li>• 0 segments programmable precision digital temperature controller.</li> <li>• 440 mm length single heating zone and 150 mm length constant temperate zone.</li> <li>• One pair of vacuum sealed flange with valves.</li> <li>• Input power: 208 – 240V AC input, single phase at max. 4K W.</li> </ul>
<p>Plasma RF Power supply</p> 	<ul style="list-style-type: none"> <li>• Out-put power: 50 - 500W Max adjustable with +/- 1% stability.</li> <li>• RF frequency: 2 – 150 MHz adjustable with +/- 0.005% stability.</li> <li>• Noise: &lt; 55dB.</li> <li>• Cooling: air cooling.</li> <li>• Power in-put: 1Kw, 206-240VAC.</li> </ul>
<p>Vacuum Pump and valve</p> 	<ul style="list-style-type: none"> <li>• Two stage mechanical vacuum pump installed in bottom case with max. vacuum pressure <math>10^{-3}</math> torr.</li> <li>• KFD25 adaptor and stainless steel pipe are connected between pump and tube flange with precision ball valve.</li> <li>• Digital vacuum pressure gauge and display are installed with the furnace.</li> </ul>
<p>Mass Flow meters</p> 	<ul style="list-style-type: none"> <li>• 4 precision mass flow meters with digital display are installed on bottom case to controll gas flow rate automatically.</li> <li>• Two MFC: Gas flow range from 0 – 200 scc accuracy and another two MFC 'ss flow range from 0- 50 SCC with 0.02%.</li> <li>• One gas mixing tank is installed on bottom case with liquid release valve.</li> <li>• 4 stainless steel needle valves is installed on left side of bottom case to control 4 type gases mixing manually.</li> <li>• Gas inlet fitting: four 1/4NPS.</li> <li>• Gas outlet fitting: four 1/4NPS.</li> </ul>