



[SENTECH ICP-RIE plasma etcher SI 500](#)

Responsible

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System Description

A dedicated Cl_2 plasma etcher for metals (e.g., Al, Cr), equipped with vacuum load lock, for reproducible, high uniformity, low damage etching and nanostructuring.

Equipped with the Planar Triple Spiral Antenna (PTSA) source, a unique feature of SENTECH high end plasma process systems, that generates homogeneous plasma with high ion density and low ion energy. It features high coupling efficiency and very good ignition behavior for processing of a large variety of materials and structures.

Sample size:

Up to 200mm wafers.

Materials restrictions:

Au free!

Please check the material compatibility with the LNQ staff every time you need to etch new materials not declared in your PICO project.

Use He instead of Ar for Al etching.

Gases available:

Free use: BCl_3 , Cl_2 , O_2 , N_2 , Ar, CO_2 , He

Restricted: (CF_4) , (SF_6)

The use of fluorine gases is only allowed with LNQ approval, to be confirmed in advance every time, because it requires compulsory manual cleaning afterward by the tool responsible!

End point detection:

The etcher is equipped with two endpoint detections (Avantes OES spectrometer and laser interferometer SLI 670).

Substrate holder temperature:

Heating up to 250°C (using He gas exchange on the backside, requires wafer holder to be loaded).

Chiller with ethylene glycol for down to -20°C cooling.

Please check the other pdf files in the Sentech folder for more details on processes and usage.