

Compact Atmospheric Pressure Microwave Plasma Source



Applications

Industrial

- Processing for semiconductor manufacturing
Etching/Ashing/Deposition
- Desmear processing of via holes on a PCB
- Processing of liquid crystal panels
- Surface modification of polyimide and epoxy materials
- Reduction processing of metal materials
- Washing after plating
- Increasing of junction strength
- Film processing
- Surface modification of lenses

Research

Medical

Chemicals

Cosmetics

- Thin film deposition
- Organic film composition
- Nano materials e.g. carbon nanotubes
- Nano particle composition
- Sterilization and washing
- Nano particle inactivation
- Organic compound composition



ADVANCED ELECTRONICS TECHNOLOGY

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Compact Atmospheric Pressure Microwave Plasma Source features a hybrid-mode type resonator. Microwave power is easily fed through a coaxial cable and a connector. A waveguide or a matching section is not required. A target can easily be irradiated from any angle and position. Plasma generated in the atmosphere is a non-equilibrium plasma with a low gas temperature that does not cause thermal reactions. Therefore, this system is suitable for continuous processing in the atmosphere e.g. irradiating plasma to targets on a conveyor belt. It is also suitable for surface processing, coating, sterilization and cleaning of various materials. It can be applied to medical and chemical processes and coming nano-and biotechnologies as well.

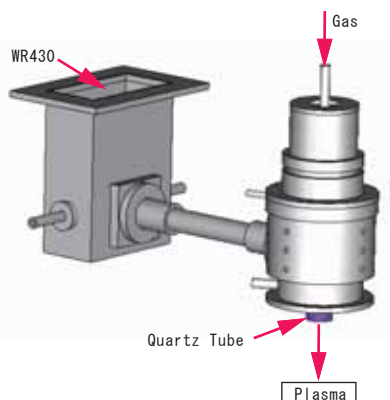


* Patent No. 3839395, 4022590 and 4035568

Compact Atmospheric Pressure Microwave Plasma Source

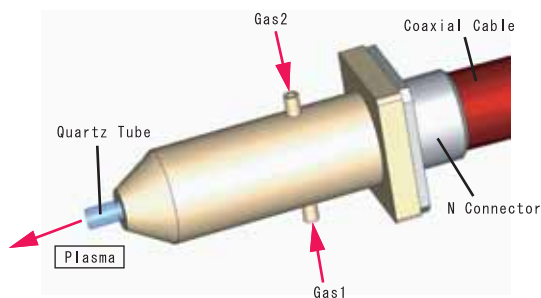
- Cavity: Hybrid-mode Resonator
- Plasma Column: Quartz Glass Tube (Inner dimensions ϕ 1mm - ϕ 20mm)
- Connector: N type or 7/16 Coaxial Connector, WR430

WR430 2.45GHz Water-cooling type



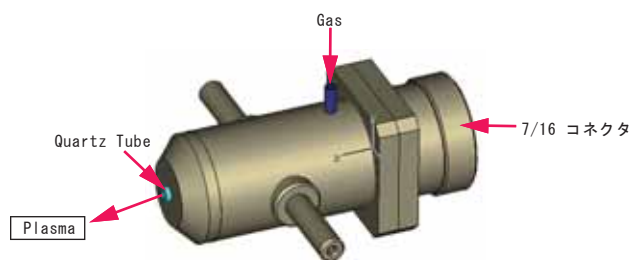
- Operating Frequency: 2.45GHz
- Size: 370mmX165mm
- Plasma Spout Diameter: ϕ 20mm
- Cooling: Water-cooling
- Input Power: 1kW max.
- Connector: WR430
- Gas: Argon, etc.

MiMi-P 2.45GHz Air-cooling type



- Operating Frequency: 2.45GHz
- Size: ϕ 22mmX55mm
- Plasma Spout Diameter: ϕ 2mm
- Cooling: Air-cooling
- Input Power: less than 100W
- Connector: N
- Gas: Argon, etc.

MiMi-P 2.45GHz Water-cooling type



- Operating Frequency: 2.45GHz
- Size: ϕ 27mmX75mm
- Plasma Spout Diameter: ϕ 2mm
- Cooling: Water-cooling
- Input Power: 300W max.
- Connector: 7/16
- Gas: Argon, etc.