

广东金徠科技有限公司

Guang Dong Jin Lai Technology Co.,Ltd

# LED封装等离子清洗机

## 型号:JL-IVM-020



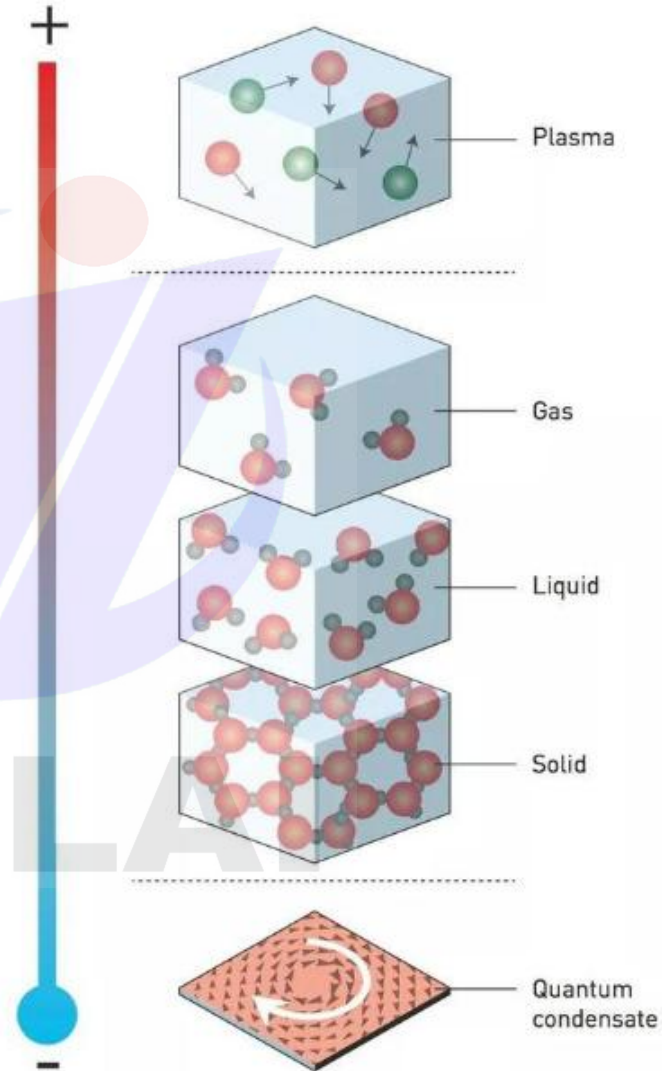
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# 等离子体的定义

What is plasma

等离子体是由离子，电子，自由基和各种活性基团组成的集合体，因其中的正电荷与负电荷的电量相等，所以被称为等离子体，是除了固态，液态，气态之外物质存在的第四种形态。给气态物质更多的能量，将会形成等离子体。通常采用加热或气体放电来实现。

Plasma is composed of ions, electrons, free radicals and a variety of active groups of the assembly, because the positive charge and negative charge of the electric charge is equal, so called plasma, is in addition to solid, liquid, gaseous substance in the fourth form. Give the gaseous material more energy, and it will form a plasma. This is usually achieved by heating or gas discharge.

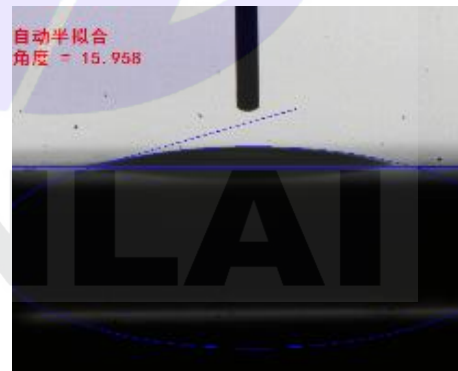
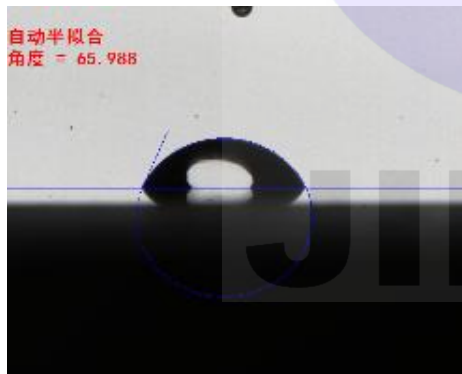


# 等离子体清洗原理

## Principle of plasma cleaning

利用高频发生器提供能量，将气体电离成等离子体。这些高度活跃的离子体对被处理物表面进行物理轰击，并发生化学反应。在物理和化学反应的双重作用下，实现分子级的污染物去除。从而达到表面清洗的目的，提高产品表面活性与附着力。最直观的检测方式为水滴角检测。

The high frequency generator is used to provide energy to ionize the gas into plasma. These highly active ionites physically bomben the surface of the processed material and react chemically. Under the dual action of physical and chemical reaction, the pollutant removal at the molecular level is realized. So as to achieve the purpose of surface cleaning, improve the product surface activity and adhesion. The most intuitive detection method is droplet Angle detection.



水滴角检测

# 常见的等离子体清洗工艺

## Common plasma cleaning processes

等离子表面处理的作用根据工艺的不同，主要包括污染物的去除，氧化层还原，表面性能活化等，增强材料表面的打线，粘接，印刷，镀膜工艺能力，有利于下一道工艺的进行。常见的清洗工艺位置有：

According to the different processes, plasma surface treatment mainly includes the removal of pollutants, oxidation layer reduction, surface performance activation, etc., to enhance the material surface wiring, bonding, printing, coating process capacity, is conducive to the next process. Common cleaning process locations are:

- |                   |   |
|-------------------|---|
| ▪ 集成电路IC封装前清洗     | IC pre-package cleaning                                   |
| ▪ 集成电路打线前清洗       | Clean IC before wiring                                    |
| ▪ 集成电路载体清洗        | IC carrier cleaning                                       |
| ▪ 硅晶片的蚀刻与表面有机物的清洗 | Etching silicon wafer and cleaning surface organic matter |
| ▪ 管壳打线封装前清洗       | Clean the shell before wrapping the wire                  |
| ▪ 玻璃表面清洗          | Glass surface cleaning                                    |
| ▪ LED打线前清洗        | Clean LED before wiring                                   |

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## JL-IVM -020 设备特点

### 产品特性/ Product characteristics

- ▶ 针对LED, IC封装工序设计。
- ▶ 模块化设计, 组件更换灵活, 切换产品快速。
- ▶ 采用13.56MHZ电源, 清洗时间短, 无溅射, 温度低。
- ▶ 运行过程实时监控, 动画指示工作过程, 一目了然。
- ▶ 设备操作权限分级管理, 便于管控。
- ▶ 设备运行状态可追索, 生产过程可管控。
- ▶ 故障报警可追索, 有提示, 快速排查故障部位, 便于维护。

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# JL-IVM-020 技术规格

## 设备参数/ The equipment parameters

型号	JL-IVM-020
设备类型	真空等离子
外形尺寸MM	850(L)*950(W)*1650(H)
腔尺寸 MM	400(L)*500(W)*650(H)
腔体材质	316不锈钢
等离子发生器	13.56MHz, 0~600W自动调节。
真空度	0.01~0.8Torr
气体通道	5路（可选）（O2/Ar/H2/CF4/N2）
冷却方式	风冷
真空泵	机械泵
控制方式	PLC+人机
真空硅	电容式
压缩空气	0.5~0.6MPa
电源	AC380V-10A
排气接口	KF40



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