

# Laser Decapsulation System

## SLP500DC Model 2020 Release

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# FUNCTIONALITIES AND ADVANTAGES OF THE SLP500DC

## SYSTEM

- New **Fiber LASER**:
  - Laser Power: **10W or better 20W**
  - Frequency: **20-200 KHz**
  - Type: **Ytterbium doped Fiber 1064nm – air cooled**
- **Atmospheric PLASMA** Assisted (Patented)
- New Lens 254mm with a marking area of 170x170mm – **Less damage to the wires**
- **Real time vision** of the decapsulation – side camera (Color - 5MP now in standard) No need to move the sample
- High density LED for lightening
- **Easy Focus** ... thanks to a side camera and a red pointer LASER
- Z Axis programmable with a travel of 390mm
- Easy and quick upgrade for **cross section and other material like Ceramic, Metal**
- **High grade** Manual Precision XY table in standard: 100 x 100mm
- Fast calibration to maintain system accuracy
- CE certified
- Many options possible



## COMPUTER & SOFTWARE SYSTEM

- Industrial computer with **Windows 10**, 2HDD
- Two 19" racks: Industrial PC and LASER Control Unit
- High grade suction unit as always
- More than **15 years of recipes** are delivered on 200+ SesameLASER
- Create and save easily your new recipes and build sketches
- Manuals and Documentation loaded on the computer
- 2 Flat panel display, keyboard and mouse

## MISCELLANEOUS

- **Small foot print, Easy to move**
- Possibility to up-grade equipment on site
- **Safety**: Fume removal system with active charcoal filter – easy change
- **2 years warranty** and "standard software" upgrade

... You will need to supply only electricity

## OPTIONS AVAILABLE FOR THE SLP500DC

### **Table with LCD Monitor Arm** (Ref. SLP-TABLE)

Special table designed for SesameLASER with a holding arm LCD, drawer for keyboard, space for the 2 racks 19" Industrial PC and LASER Control Unit



### **Upgrade for Cross-Section** (Ref. SLP-CS20W or SLP-CS20W-M)

This option allows the SLP to perform Cross Section on various devices and materials (see examples next page).

The M version provides multiple pulses duration (from 4ns to 200ns) and pulse rate from 1,6kHz to 1000kHz



### **Coaxial camera through Galvo Head** (Ref. SLP-GHC-5MP-BW)

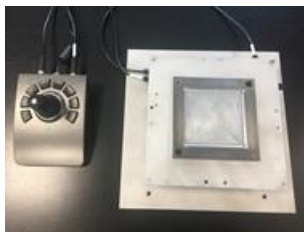
This camera, 5MP B&W, allows the SLP to get a real view of the sample with a high resolution

### **Green LASER Pointer** (Ref. SLP-GLP)

This green pointer improves focalization and preview visualization on less reflective samples

### **Enhanced Cooler Blast** (Ref. SLP-CB)

This enhanced cooled air blows off helps optimize recipes more efficiently and protects delicate components



### **Programmable X-Y Table**

(Ref. SLP-XY50: 50x50mm or Ref. SLP-XY100 100x100mm)

These tables allow programmable manipulation of the chip being processed.

## APPLICATION EXAMPLES OF THE SLP500DC

**Key applications of the SLP500DC are multiple:**



- Package pre-opening: plastic, ceramic and MEMS
- Pre-cavitation on power devices
- Exposure of components without destruction of Al, Au, Cu, or Ag bond wires
- Circuitry can be revealed without acid
- All bonding access for shear test
- Complex-shaped cavities can be made
- For applications requiring subsequent acid cleanup, low temperature, low corrosion conditions can be used.
- Glob top removal (flip chipped or wired dies on PCB or ceramic)
- Gaskets Maker
- Cross section preparation
- Bonding cut
- Thin PCB cut
- Small cavity allows visual check on a wire or on PCB or on stitch
- Full BGA/QFN... decap down to PCB
- Glued cover glass removal (ceramic package)
- Component identification marking
- Silicon frames preparation (polishing preparation to decrease edge effect)
- Disassembling of complex mechanical assembly by surgical cuts (motorized lens in front of CCD sensor, MEMS...)
- Pre-thinning of ceramic packages for back side access
- Allow to reduce a lot the temperature and etching time of wet or dry decapsulation
- Decapsulation of Hybrid Module

## TECHNICAL CHARACTERISTICS

### SLP500DC

<b>STANDARD CHARACTERISTICS</b>	
Average LASER power	10 W
Frequency	20 – 200 KHz
Wavelength	1060 - 1070 nm
Security	Class 1
Use voltage	110 / 250 V AC
Consumed power	650 W
Functioning temperature	10°C – 40°C
Cooling	By air
Dimension main unit SLP500DC	535 x 900 x 840 mm
Dimension supply unit	2 racks 19" 4U
Slotted tray	T slot with 25 mm pitch
Weight	112 Kg
Axe Z – programmable adjustment	390 mm
Working zone dimension	425 x 375 mm
Working process area (Lens F= 254mm with working distance 310 mm)	170 x 170 mm
Lateral Camera FOV F 254mm / wd 310mm	67 x 48 mm (Color/5Mp/25mm)
Atmospheric Plasma Assisted Gas	N <sub>2</sub> : 50 sccm @ 1bar
<b>OPTIONS CHARACTERISTICS</b>	
Table with LCD arm dimension	760 x 760 x 660 mm
Table with LCD arm weight	80Kg
Cross section Laser	20W – 20-200 KHz – 700 W
Modulated LASER	1,6 to 1000MHz – 4 to 200ns
Table 50 mm x 50 mm	Accuracy +/- 15um
Table 100 mm x 100 mm	Accuracy +/- 30um
Cooler blast	Dry air: 5 to 7bar