



## Introduction

LCVD laser repair equipment is an automatic repair equipment designed for the process defects and defects of LCD display screen. With the leading machine vision system of SEMISHARE as the core, the equipment can provide high-precision and low-cost solutions for the defects of LCD finished products and semi-finished products, so as to improve the business efficiency to a greater extent.

## Application Direction

Tft-lcd and OLED Array Panel circuit open and short circuit repair, Mask defect repair

## Product Feature

- High power optical image recognition, automatic calibration focus
- Laser system visual operation, greatly improve the efficiency of repair
- Linear motor structure, 1um laser precision, high speed mute
- Automatic AOI positioning, automatic upper and lower slice
- Rich software testing function, high precision calibration of mechanical system
- Repair shape can be edited, can be multi-station design
- Leading internal anti-shock system device, more stable operation
- Electrical shielding system, shielding light and electromagnetic interference

## Specification

Model	LCVD-G6	LCVD-G8.5
Dimension	W 2850mm*L 2500mm*H 2500mm	W 4000mm*L 3500mm*H 2500mm
Weight (about)	7500KG	10500KG
Electricity Demand	380V, 50Hz, 3Phase, approx. 40A Max.	380V, 50Hz, 3Phase, approx. 60A Max.
Repair capacity	Repairable panel size	L * W ≤ 1500mm * 1850mm, Thickness ≤ 3mm
	CVD material	W, Cr, MO, Al
	Line deposition velocity	5~10μm/s ( Thickness 5000Å )
	Single defect repair time	After positioning, the time of repairing a single defect is about 5 seconds.
	Recipe	Software edit and stroed locally
	Cutting width	1μm~50μm adjustable
	CVD width	2μm~30μm adjustable
	CVD edge accuracy	±0.5μm
	CVD thickness	2000Å ~15000Å Adjustable
	Resistance of deposition line	<65Ω (width: 5μm, Length : 50μm, Thickness : 5000Å)
CVD stability	Cleaning times by cleaning machine	>10 times
	Strong acid-base test	> 1H
	Brush wipe	> 1H
	Ultrasonic	1Mhz > 1H
Gantry	X-Y-Z travel range	LCVD-G6 1500*1850*58mm LCVD-G8.5 2500*2200*58mm
	X-Y velocity	0~400mm/s adjustable
	X-Y resolution (minimum movement)	0.1μm
	Z velocity	0~2mm/s Adjustable
	Z resolution (minimum movement)	0.1μm
	Repeatability accuracy	±5μm
Microscope	Magnification	50X~ 1000X
	Objectives	5X,10X, 20X, 50X NIR, 50X UV, 50X NUV Objects
	Optical resolution	0.7μm
	Objective switching speed	0.2~0.7s
	Switching lens deviation	Less than 3μm
	Focus	Laser auto focus
	Camera	2 million pixels
Lighting	TOP/Bottom coaxial LED light, Light adjustable independently	
Laser	Laser system	DPSS Laser cutting system CW Laser deposition system
	Energy regulation accuracy	0-1000 steps 0-100%
	Slit size	0~2.5mm
	Slit accuracy	1μm
	Laser energy calibration mode	Automatic calibration
	Calibration time cost	3mins
	Laser energy calibration accuracy	Better than 2%
	Wavelength	Cut Laser: IR 1064nm, GRN 532nm, UV 266nm CVD CW laser: NUV 351nm
	Pulse width	< 12 ns
	Spot size	2.0~ @50X object 1064nm ( test on standard mask)
Scanning energy uniformity		Better than 5% @IR
	Laser lifetime	Cut Laser: 1 billion excitation CVD CW laser: 8000 hours
Repair mode	Scan mode and Step mode	
Scanning path	Arbitrary path definition	
Working mode		Automatic repair, automatic data load, on-line communication
		Manual or automatic repair
Panel load	Robot	
CIM system	Yes	
Anti-vibration	Vibration free table installed	
Industry PC		23-inch display & computer: i7 processor, 2 blocks
		1TB hard disk (one of which is a backup hard disk), 8G memory, 1G Independent video card, DVD-ROM
Communication interface	RS232 / EtherCAT / GPIB etc.	
Security		Frame covered , and the operator operates outside .
		EMO
		Limit sensor, Motion platform and Laser system limit interlock
	Alarm	