

DCT DirectLaser-C

Circuits Structuring with DCT DirectLaser technology



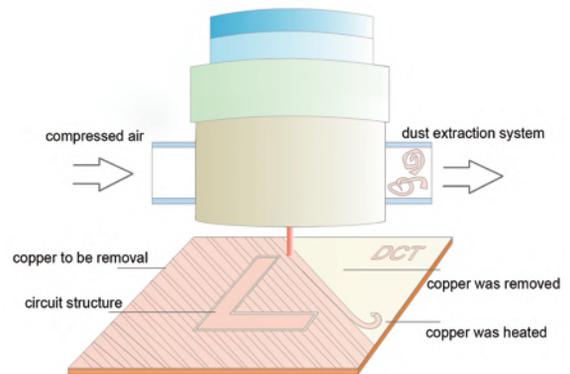
A directlaser structuring system for PCBs, as simple as printing, is suitable for different kinds of PCBs and small batches, especially suitable for ultra high dimensional accuracy PCBs such as RF and microwave PCBs. High processing quality, high speed, compacted and easy operation, reliable, low cost of purchase and operation, set up a new standard of cost performance for laser PCBs equipment.

For working on electronics, there is fewer setbacks in design stage, while it is common for failure during the process of turning design into products. Therefore, it is rigid demand, other than soft demand, for equipments which could cure the problem of “easy to design PCBs, hard to turn the design into reality”.

The chemical method of processing PCBs is an indirect technology, troublesome and has environmental problems. It limits the manufacturability of design. The mechanical method of processing PCBs, is slow and limited in precision. The laser method of processing PCBs, laser beam abate and removal material spot by spot, slow and may damage the insulating substrate.



For the criterion to judge a technology or an equipment, high processing quality is a must to be considered, fast processing speed is also to be considered, it would be ideal to take low cost of purchase and operation also into consideration. DCT direct laser circuits structuring system DLC series, just has these characteristics.

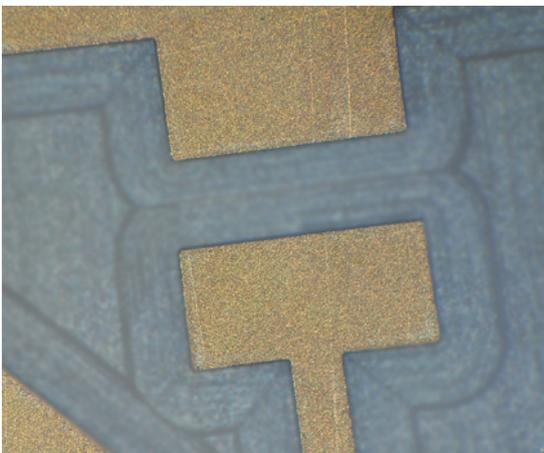


The main innovation character for DCT proprietary technology - the Striping&Stripping technology (referred to as S&S), are both high processing quality, and fast processing speed.

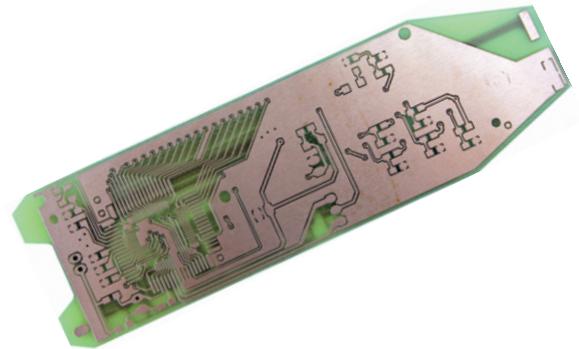
Firstly, with depth control character, focused laser beam separate the copper foil to be removed into small thermal isolate zones, that is, stripping. Then, according to different thermal conductivity and thermal expansion and contraction properties of different materials, stripe off the isolate zones by heating with defocused laser, collect striped-off copper by dust absorption system, thus swaths copper could be easily and quickly removed, that is, stripping.

Laser directly circuits structuring technology S&S, without masks or tools, no deviation caused by indirect process, no loss on surface smoothness of the copper, geometric deviation of conductive tracks can be limited within 5 μ m, it is especially suitable for processing impedance and loss-sensitive circuits such as high-speed, RF and microwave circuits.

The powerful DCT data processing software CircuitCAM and machine operating software DreamCreaTor of DCT DLC Series equipment, can optimize the laser processing path and parameters according to exact conductive pattern of circuit board, make full use of the advantages of direct laser processing, powerful, intuitive, fluent and easy to use.



The optical path of DLC series equipment is simple, well sealed and of stable performance. The humanized designed equipment comply with CE and CCC standards. DLC series equipment also includes CCD automatic alignment system, industrial control computer, vacuum adsorption platform for workpiece



loading. Further more, DCT specialized developed a vacuum cleaner for direct laser circuits structuring technology, with lower noise and high efficiency, to collect copper crumbs during processing. DCT focus on direct laser circuit technology with many years of innovation and improvement. Both hardware and software are developed by the same company, with solid structure, high reliability, compact structure, small occupancy space, DCT equipment is suitable for installation in the laboratory with narrow space with turnkey solution and plug-and-play, suitable for PCBs processing on demand at any time, get through the last mile for turning the electronic design into real products.

There are DCT and professional service and application engineers, as well as application centres in Shenzhen, Suzhou, Tianjin and Chengdu. DCT service system is always ready to provide pre sales training and after-sales technical support for new and old customers. For application reports and more information, welcome to contact DCT!

Technical data	DirectLaser-C1	DirectLaser-C6
Working area	300mmx300mm	533mmx610mm
Wave length	1064nm	1064nm
Minimum track/gap	25µm/25µm	25µm/25µm
Processing speed	Up to 20cm ² /min*	Up to 30.6cm ² /min*
Repeat positioning accuracy	≤±2µm	≤±2µm
Resolution scan field	1µm	1µm
X/Y step resolution	0.5µm	0.5µm
Weight	270kg	2.1t
Dimension (L x W x H)	850mm x 900mm x 1450mm	1750mm x 1400mm x 2115mm
Data acceptance	Gerber, HPGL, Sieb &Meier, Excellon, ODB++, DXF	

Ancillary facilities	DirectLaser-C1	DirectLaser-C6
Data processing software	CircuitCAM 7 LaserPlus	CircuitCAM 7 LaserPlus
System operating software	DreamCreaTor	DreamCreaTor
Dust exhaust system	inclusive	inclusive
Industrial PC	inclusive	inclusive
Positioning	Automatic CCD camera fiducial positioning	Automatic CCD camera fiducial positioning
Work piece fixation	Vacuum absorbing platform	Vacuum absorbing platform

Operation environment	DirectLaser-C1	DirectLaser-C6
Power supply	220/230VA, 50Hz	380VAC, 50Hz
Power consumption	1.7kW	3kW
Operation temperature	22C°±2 C°	22C°±2 C°

* Based on 18µm Cu

All technical data are subject to change without notice



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