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Electronics Welding

- **Overview**

With the rapid development of 3C digital industry, 3C digital products have become advanced integrated and high accurate. While internal components get smaller, the precision and electronic integration get higher. So, there are increasing requirements of appearance, deformation and drawing force of internal components to welding technique. With high energy, precision and directivity, laser products are widely used for internal structure welding of 3C products. In the production process of high-end digital equipment, laser welding technology plays an important role in volume optimization and quality enhancement to make the products lighter, thinner and more stable.

Laser welding technology has been widely used in most of the digital products. However, there are still some problems.

- High material and maintenance costs;
- With different laser sources, the optical pattern will be different, which may lead to different welding effectiveness and efficiency.

- **Our Solution**

As the leader of laser industry, HGLASER aims to promote the application of different laser devices in industries and provide the full range of solutions.

The fiber laser welding machine and pulse fiber laser welding machine of HGLASER have solved the problems on welding successfully. They are widely used in welding the internal structure of 3C digital products.

With better flexibility, good beam quality and installation flexibility, the fiber laser welding machine can realize non-contact flexible welding in inaccessible location. It can also process multiple beams simultaneously and provide more precision welding.



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Compare the two welding machine:

Hard Light Path	Fiber Laser Welding Machine
The center energy is the highest	The spot energy spreads uniformly
Welding joints are not beautiful and not suitable for high-demanding spot welding, which leads to sealing off and penetration.	Welding joints are smooth and beautiful, and suitable for high-demanding spot welding with high stability.
Laser focus height changes at different power	Fixed laser focus position
Fixed light path, integrated specific machine into workbench, small size, poor flexibility, not suitable for automatic production line	The flexible connection is easy for remote cooperation with main engine and automatic production line.
No energy feedback function, volatile energy	Has energy feedback function, stable energy
Difficult in spectroscopy	Easy in energy spectroscopy and time spectroscopy

• Customer Benefit

With laser technology, customers will benefit much:

- Without tool wear, the operating and material costs are reduced;
- Fast speed working improves production efficiency greatly;
- The permanent markers promote product anti-counterfeiting ability;
- The laser marking machine is a high-tech, environmentally friendly product, won't produce any chemical substances harmful to human body and environment;
- Without ink and chemical solvent, the working environment is clean and non-pollution;
- Brand awareness of products will be increased by classier products and additional value;
- With the traceability system, all aspects of the whole manufacturing process and the operating costs can be controlled effectively;
- The good flexibility of laser marking machine increases the diversity of products.

• Related Application



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