WHAT ARE LASER CUTTING APPLICATIONS IN SEMICONDUCTOR INDUSTRY

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The semiconductor industry involves the design, development, manufacture and sale of small electronic components and chips. These semiconductors are found in nearly every modern technological device we use. Semiconductors play an important role in the laptops, computers or smartphones we use every day. With the innovations and technological breakthroughs that have been continuously experienced in recent years, the semiconductor industry has grown rapidly. The increase in semiconductor production has manufacturers looking to produce more semiconductor products in a shorter period of time. And, as modern electronic devices get smaller, semiconductors must also get smaller. Therefore, the manufacturing process of semiconductors requires efficient, high-speed, and more detailed operations. Although this sounds like too much to ask, the efficiency and quality of laser cutting has reached such requirements, so it has been widely used.

For the laser semiconductor industry, one of the biggest advantages of laser cutting is its cutting accuracy. Previously, with conventional methods, space had to be left on the semiconductor for cutting. This problem does not arise with lasers, because the kerf is so thin that almost no material is lost. Another benefit of laser cutting is the ability to quickly switch between multiple applications, reducing idle time between each task and working at breakneck speeds for mass production.

Another reason why laser cutting is so useful in this industry is that its non-contact process does not cause any unnecessary thermal damage to the surrounding area of the semiconductor. Because these parts are installed in highly complex machinery, it is imperative that their quality is not compromised. Laser cutting not only has high precision, but also has the ability to cut complex shapes, which is very beneficial to this industry. Semiconductors are not just one shape or size and must be adjusted to accommodate newly installed equipment. Laser cutting works well with a variety of semiconductor materials, including metals and silicon.