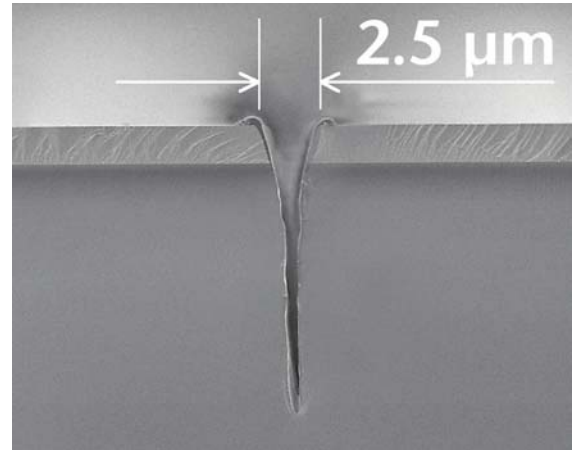


JPSA Awarded LED Wafer Scribing Process Patent

Manchester, New Hampshire, USA – J. P. Sercel Associates Inc. (JPSA), the world's leading designer, supplier, and systems integrator of laser materials processing workstations, has been awarded a patent for its front-side laser scribing technique for LED wafers. The patent is applicable in Korea. The patented technique involves the use of a unique laser energy distribution technique, allowing extremely narrow kerf widths – 2.5 microns wide – resulting in faster processing and higher yields. Narrower kerfs also yield more die per wafer.

JPSA developed the LED sapphire wafer dicing capability developed with the IX-200 Chromadice DPSS UV laser wafer singulation system. The new patented technique provides the ability to process wafers at higher yields for LED manufacturers, according to Jeffrey P. Sercel, president.

"Our Chromadice system, using this patented process, can process fifteen 2-inch wafers per hour " Sercel said, in making the announcement. " That represents a dramatic increase in throughput compared to diamond scribing and conventional laser techniques."



The IX-200 ChromaDiceT DPSS version is a high-precision wafer dicing (singulation) system also suitable for wafer trimming and scribing applications. Its UV diode-pumped solid-state (DPSS) laser system delivers high-speed wafer dicing and cutting with typical yields greater than 99% at less than \$2 per wafer. The process is tolerant of wafer warp and bow and suitable for all wafer types. The IX-200 system is also available in an excimer laser version for via drilling, micromachining, thin film patterning and many other semiconductor packaging applications including LED liftoff.

JPSA products and services include UV excimer, DPSS and ultrafast laser micromachining systems, UV and VUV laser beam delivery systems, as well as automation and motion systems. Additionally, JPSA performs contract manufacturing, optical damage testing, laser materials processing development and excimer laser refurbishment services.

For more information, visit www.jpsalaser.com, or contact the company at 220 Hackett Hill Road, Manchester, NH 03102 USA, Tel. 603.518.3200, fax 603.518.3294.