

Kulicke & Soffa Collaborates with TSMT

To Accelerate Advanced Display Adoption in High-Volume Markets

SINGAPORE, Aug. 8, 2023 /PRNewswire/ -- [Kulicke and Soffa Industries, Inc.](#) (NASDAQ: KLIC) ("Kulicke & Soffa", "K&S", "we" or the "Company") announced its collaboration with TSMT (Taiwan Surface Mounting Technology Corp), a worldwide leading LCD SMT (Surface Mount Technology) solutions provider, to advance mini LED backlight and direct emissive displays for high-volume adoption.

Mini LED technology in displays is anticipated to increase rapidly over the coming years, providing new opportunities for Kulicke & Soffa's advanced display portfolio. TrendForce, a world leading market intelligence provider, anticipates mini LED wafer shipments will increase at a CAGR of 38%, to over 8M four-inch equivalent wafers, through 2027. During this period, LED die size is expected to be reduced significantly in both backlighting and direct emissive applications, accelerating the transition from more typical semiconductor die-attach approaches, to dedicated advanced display approaches. The Company's dedicated advanced display solutions – PIXALUX™ and LUMINEX™ – support demanding market requirements with new-levels of throughput and high-accuracy placement capabilities. Leveraging these innovative dedicated solutions as well as the collective process knowledge of both K&S and TSMT, this collaboration seeks to overcome today's process challenges to accelerate the mass adoption of advanced display technology.

PIXALUX™ quickly became the largest installed base of ultra-fast dedicated mini LED placement equipment shortly after its 2018 introduction. Today, LUMINEX™ extends K&S leadership by providing a dedicated laser-based mini and micro LED transfer solution that enhances flexibility, yield and productivity for panel and display manufacturers. LUMINEX is designed to transfer small die with high accuracy and throughput.

"We are excited to enhance our long-term relationship with K&S to deliver high-volume manufacturing solutions for mini LED backlighting and direct emissive displays. Through joint efforts, LUMINEX™ has achieved an impressive production throughput of 540K units per hour (UPH) at 15µm 3-sigma accuracy, broadening the market reach for this technology. We are currently working on improving the yield from 99.99% to 99.999%," said John Wu, TSMT's President.

"Our comprehensive advanced display portfolio directly serves the technology needs of major display markets rapidly transitioning to advanced display technology. Key markets transitioning include high-volume televisions, IT displays, as well as both large and small format direct-emissive displays. Today, LUMINEX™ is the most compelling high-volume manufacturing solution for mini-LED transfer and we are extending its capability to micro LED," said Chan Pin Chong, Kulicke and Soffa's Executive Vice President, Products and Solutions.

The throughput of LUMINEX™ is scalable through its various modes of operations – Precision Correction Mode (PCM), Multi-pattern Placement (MPP) and SCAN Mode. In the scan mode, it is capable of throughput of over 30M UPH. While LUMINEX™ is preparing to move into high-volume adoption for mini-LED applications, initial micro LED development results are encouraging and the Company has achieved 4µm 3-sigma accuracy for direct die placement of 40µm x 80µm die. This solution is also suitable for Micro LED in Package (MIP) applications.

About Kulicke & Soffa

Founded in 1951, Kulicke and Soffa Industries, Inc. specializes in developing cutting-edge semiconductor and electronics assembly solutions enabling a smarter and more sustainable future. Our ever-growing range of products and services supports growth and facilitates technology transitions across large-scale markets, such as advanced display, automotive, communications, compute, consumer, data storage, energy storage and industrial.

Cautionary Statement Regarding Forward-Looking Statements

This press release contains statements relating to future events and our future results. These statements are "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, statements regarding the market for mini and micro LED displays and the performance and competitiveness of our particular solutions. While these forward-looking statements represent our judgments and future expectations concerning our business, a number of risks, uncertainties and other important factors could cause actual developments and results to differ materially from our expectations. These factors include, but are not limited to, the execution and effect of our business strategy, future business decisions made by us and our competitors, the effects of macroeconomic headwinds on our business and industry, and the other factors listed or discussed in our Annual Report on Form 10-K for the fiscal year ended October 1, 2022, filed on November 17, 2022, and our other filings with the Securities and Exchange Commission. Kulicke and Soffa Industries, Inc. is under no obligation to (and expressly disclaims any obligation

to) update or alter its forward-looking statements whether as a result of new information, future events or otherwise.

About TSMT

Founded in 1990, Taiwan Surface Mounting Technology Corp. (TSMT) is a reputable leader in providing top-tier Printed Circuit Board Assembly (PCBA) manufacturing services. Specializing in SMT (surface mount technology) processes and backed by robust engineering analysis capabilities, TSMT collaborates closely with global clients in the semiconductor, automotive, and consumer electronics industries, enabling innovative technologies.

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