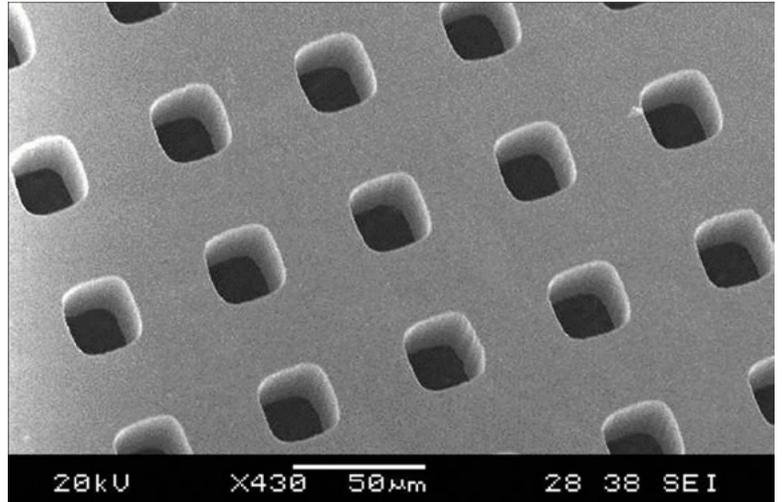
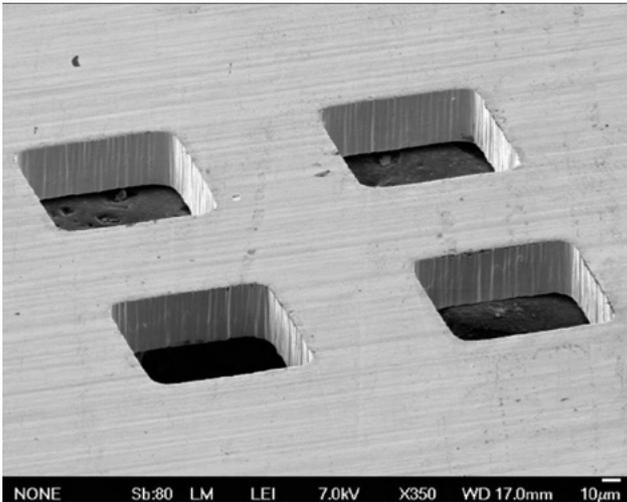


# DEK Electroform Mini LED Stencil

Miniaturization trend demands stencil with smaller apertures.



In recent years, miniLED has emerged as a new segment with high growth potential and has drawn the interest of most major LED companies. miniLED are used in the back-light units (BLUs) of display screens and are very competitive both in terms of cost and function, offering excellent contrast through the use of local dimming. However, miniLED products pose a real problem to the packaging industry which has not yet developed solutions for handling such small dies with the accuracy and throughput required; a typical miniLED die is smaller than an 0201m component.

The challenges related to stencil printing for miniLED products involve printing paste deposits which are smaller than 100µm in size and controlling the uniformity of the paste deposits to avoid die tilt, bridging and other defects. Electroform is uniquely positioned to address these challenges. Electroformed stencils have better paste release capabilities, a result of the superior smoothness of the aperture side wall and the surface energy of nickel.

In addition, miniLED products using RGB configurations typically require more than 100,000 apertures in one stencil as well as a stencil thickness in the range of 23 – 40 µm. Laser cut stencils are not able to meet such requirements.

## Specifications:

- Aperture Size: 50 µm × 50 µm (minimum), ± 4 µm
- Thickness: 23 µm (minimum)
- Gap between apertures: 50 µm (minimum)
- Frame Size: DEK VectorGuard™ 23" × 23"
- Positional Accuracy: 0.1 µm/mm

# ASMPT

ASMPT Americas  
Phone: +888 768 4357 (press 2)  
Email: [smtparts.us@asmpt.com](mailto:smtparts.us@asmpt.com)

ASMPT Europe  
Phone: +40 722 692 108  
Email: [asmpt-ppsp.eu@asmpt.com](mailto:asmpt-ppsp.eu@asmpt.com)

ASMPT Asia  
Phone: +65 6877 3900  
Email: [spares.sg@asmpt.com](mailto:spares.sg@asmpt.com)



Process Support  
Products Website

[psp.smt.asmpt.com](http://psp.smt.asmpt.com)



Process Support  
Products Webshop

[smt.asmpt.com/en/  
myasmpt/webshop](http://smt.asmpt.com/en/myasmpt/webshop)



ASMPT SMT Solutions  
Website

[smt.asmpt.com](http://smt.asmpt.com)



ASMPT  
Website

[asmpt.com](http://asmpt.com)



ASMPT SMT Solutions  
YouTube

[www.youtube.com/c/  
ASMPTSMTolutions](http://www.youtube.com/c/ASMPTSMTolutions)

Edition 9/01-2023 | All rights reserved. All rights reserved. | Order No.: A22-ASMPT-A322-EN | Printed in Germany | © ASMPT GmbH & Co. KG

All information and illustrations in this brochure are provided "as is" and without any warranties of any kind, whether expressed or implied, including but not limited to, implied warranties of satisfactory quality, fitness for a particular purpose and/or correctness.

The contents of this brochure are for general information purposes only, do not constitute advice, and are subject to change without notice. ASMPT therefore makes no warranties or representations regarding the use of the content, details, specifications or information contained in this brochure in terms of their correctness, accuracy, adequacy, usefulness, timeliness, reliability or otherwise, in each case to the fullest extent permitted by law. Please contact ASMPT for the most current information. Any specific performance features and/or capabilities will only be binding if contractually agreed upon.

All product names are brands or trademarks of ASMPT or other suppliers. Unauthorised use by third parties may violate the rights of their owners.