

## NEST 4 Microfabricated Cuff - CAD Models

Updated 22 June 2023

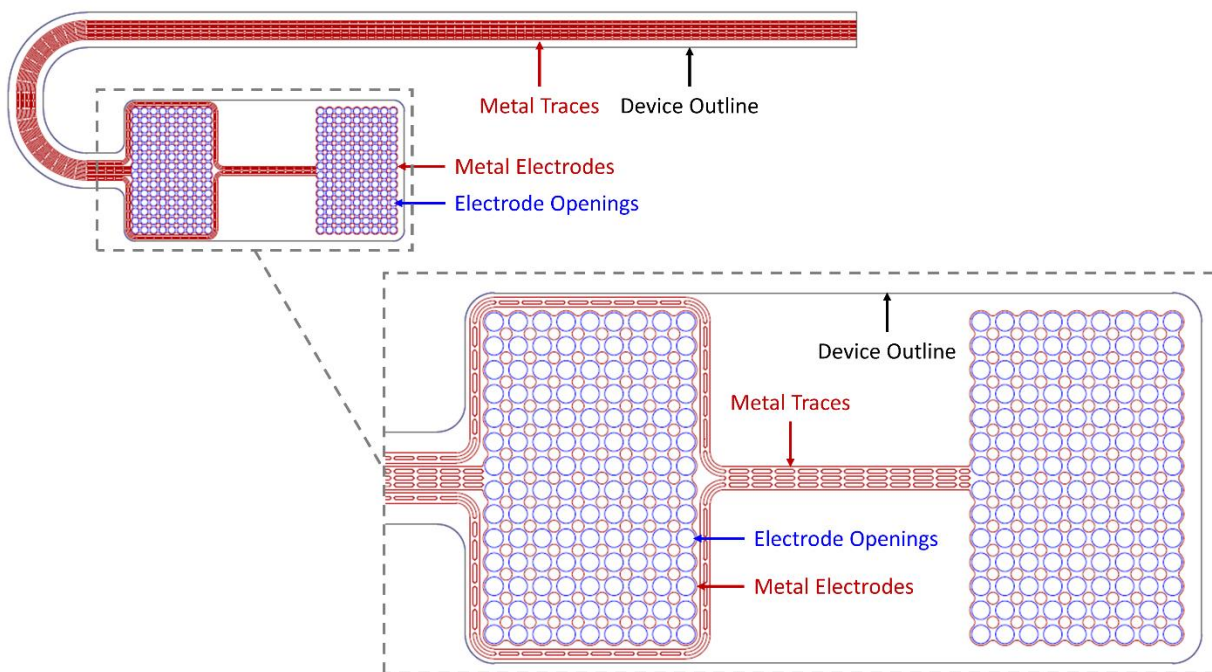
For each selected design (B3- and E3-), a 2D mask layout and 3D rendering are included. Full CAD files will be available on GitHub.

The image below shows a labeled sample of a 2D layout with a full device layout (top) and a zoomed in layout of the electrode region (bottom). The bondpad region (at the end of the tail) is not yet included as it will depend on process development from Med-Ally that is still in process.

Red lines are the outline of the patterned metal. Note that the metal is not filled in (due to constraints of the modeling software used for mask design); the lines in the image represent the edges of the metal.

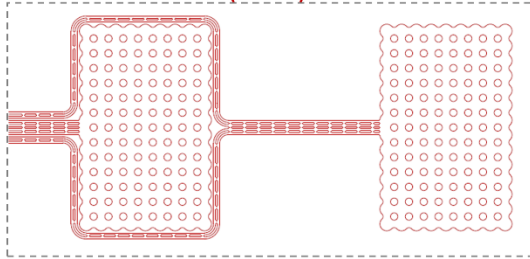
Blue lines are the electrode opening outlines. These circles will be where Parylene is etched open to expose the metal to the nerve.

Black lines are the outline of the device.

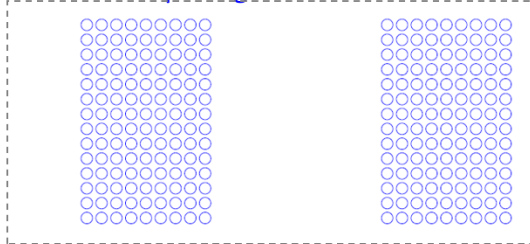


All images shown in the sections below are similar to the one above, but unlabeled. The colors represent three layers of the 2D CAD model. These layers are shown separately in the image below for clarity, but are not included for each model in this document. CAD files on GitHub include all layers separately.

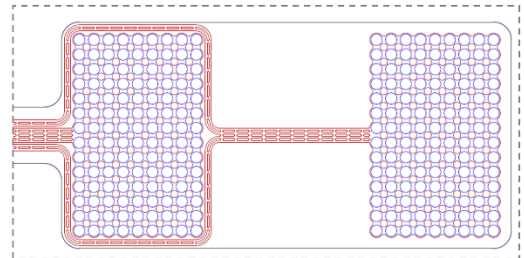
Patterned Metal (filled)



Electrode Openings

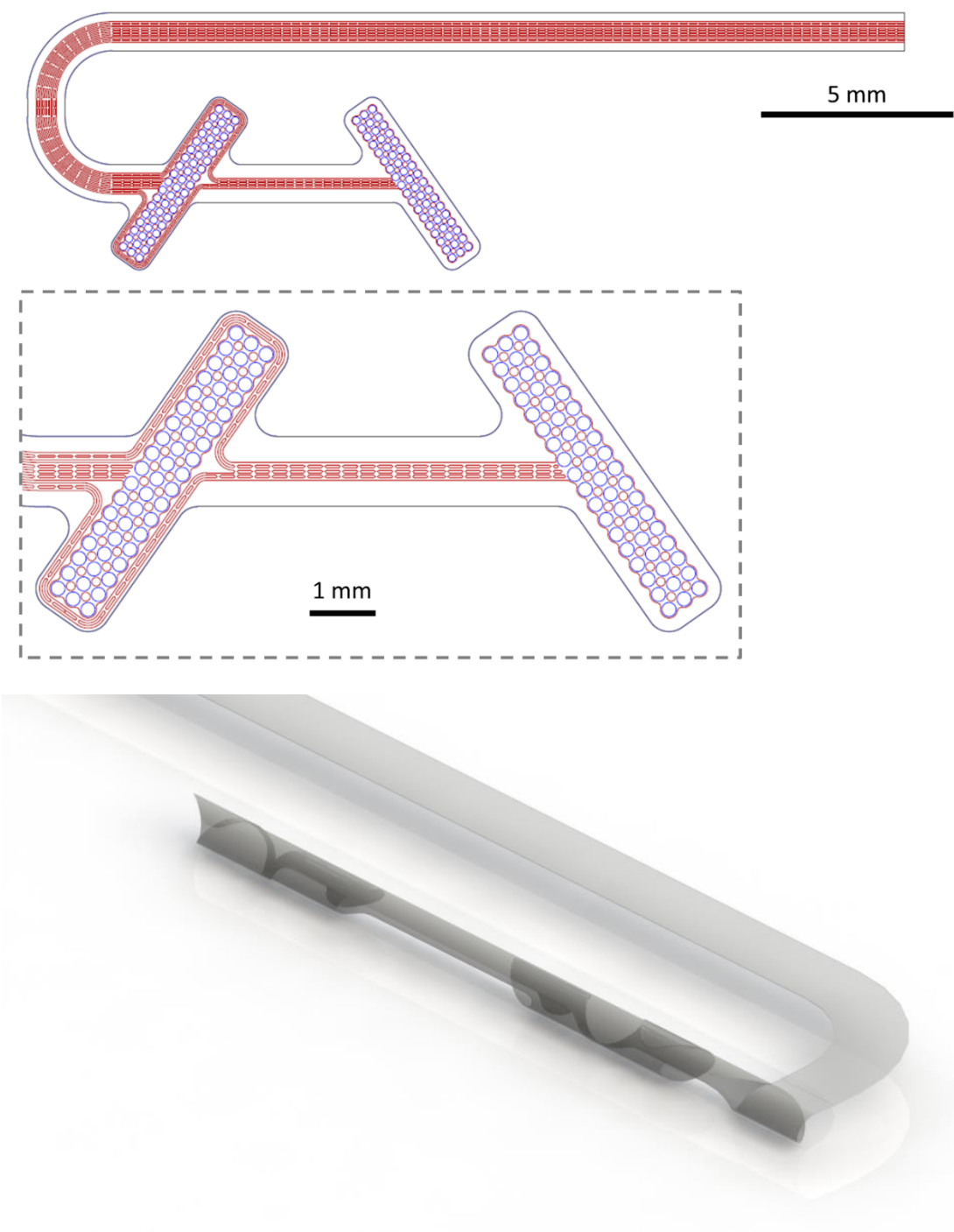


Device Outline

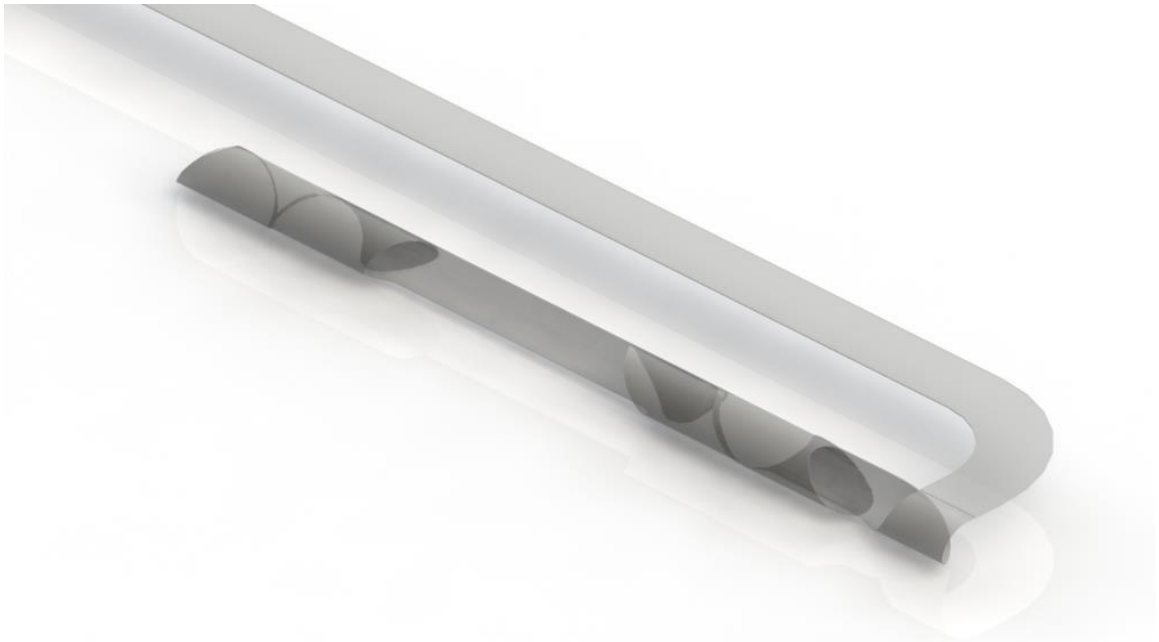
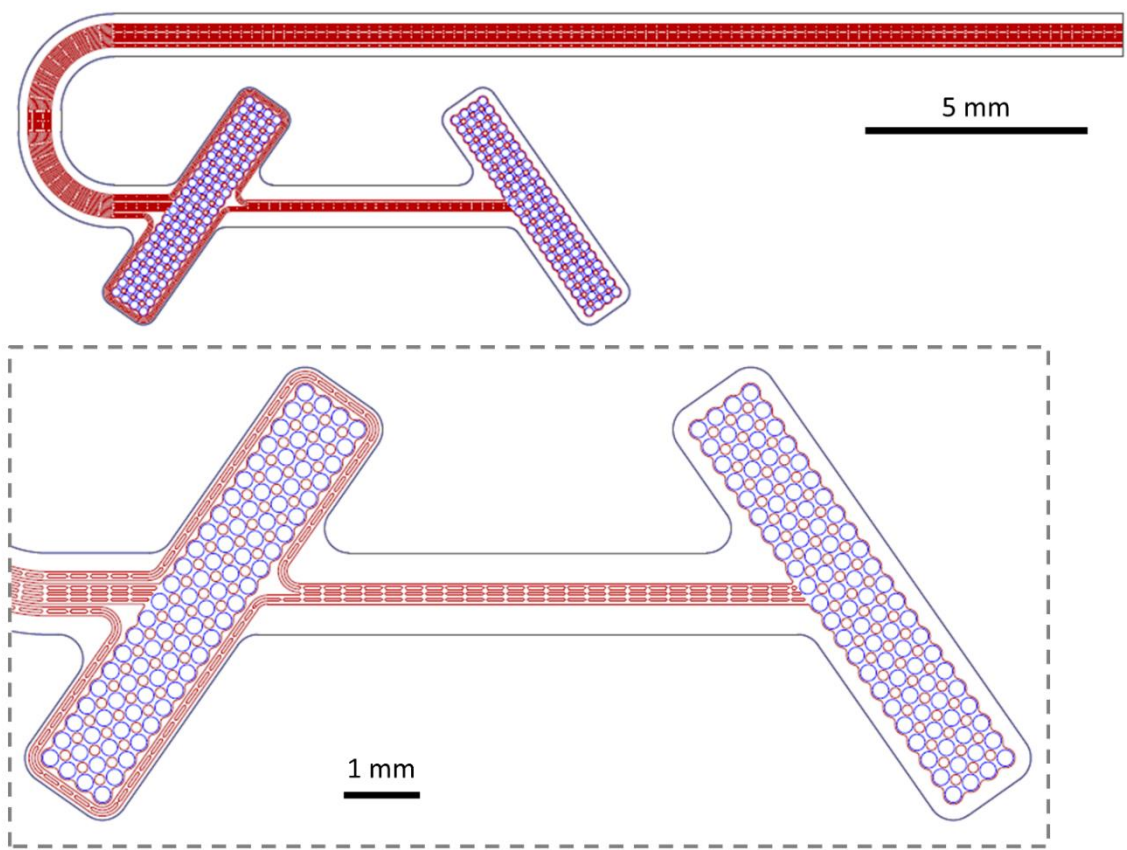


Below the 2D layout, a 3D rendering of the device is shown. The 3D model shows the overall device shape (only the Parylene backbone, no electrodes or other metal is included).

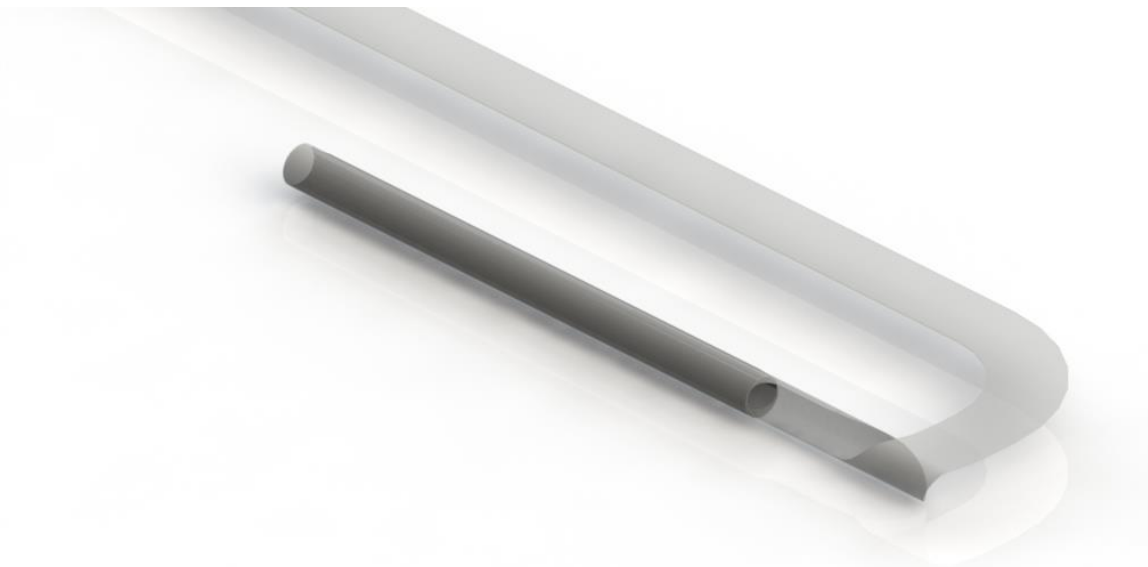
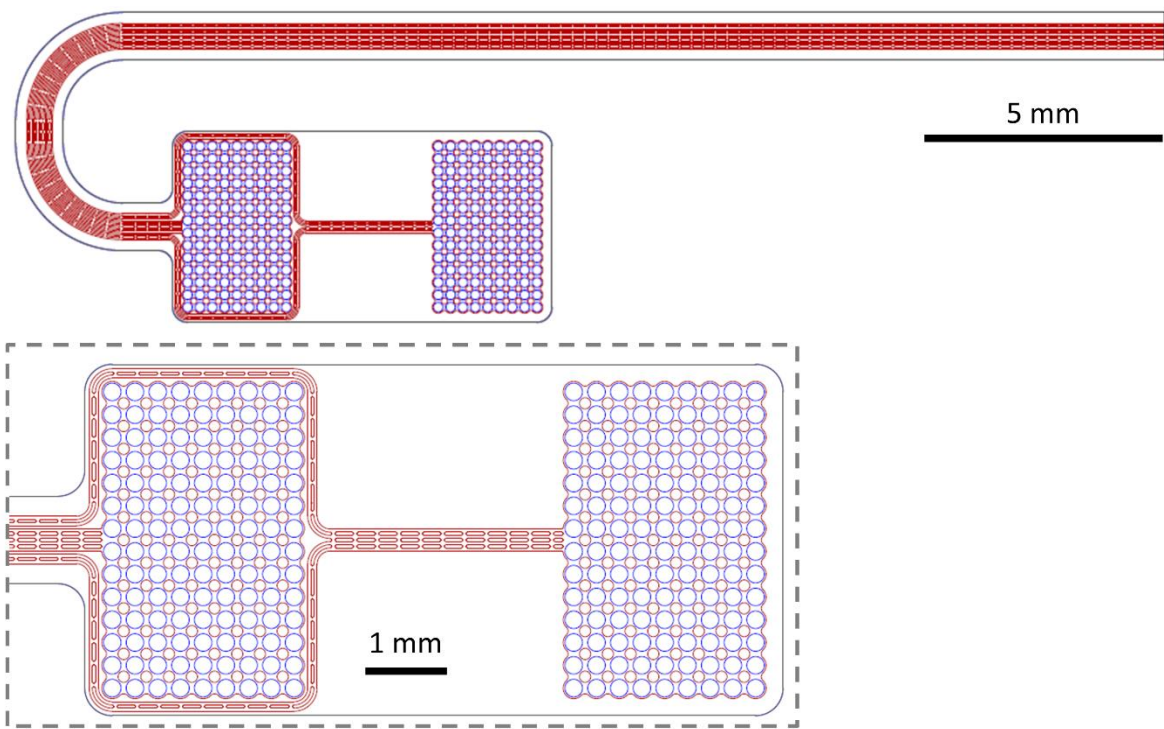
B3- (Small)



B3- (Large)



E3- (Small)



E3- (Large)

