

Multi-layer SU-8 Master Mold

-.- 3D Microfluidics -.-



Multilayer SU-8 resin microstructures can be manufactured on a Silicon wafer in order to get master Molds with high precision and resolution.

» Multi-layer Mold basic features

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|--------------------------------|--|
| » Mold dimensions: | 4 inch wafers (~100 mm). The effective area for the structures in the mold is 90 mm Ø. |
| » Substrate material: | Silicon (other substrates such as glass or polymers, may be available on demand) |
| » Structures material: | SU-8 resin |
| » Structures layers: | Up to 2 layers |
| » Typical aspect ratio: | 1:1 (Width:Height). Other aspect ratio available on demand. |
| » Minimal features: | Height: 5 µm Width: 5 µm |
| » Tolerance: | Height: <10% Width: <2 µm |

Up to two SU-8 layers (*3D microfluidics*) can be patterned with high aspect ratio on silicon substrates:



Silicon wafer could be cut on smaller rectangular pieces in order to get individual masters. Other technical features can be fulfilled under request.

» Applications

SU-8 master molds provide a cost-effective and useful tool for soft casting polymers (like PDMS) as well as hot-embossing processes.



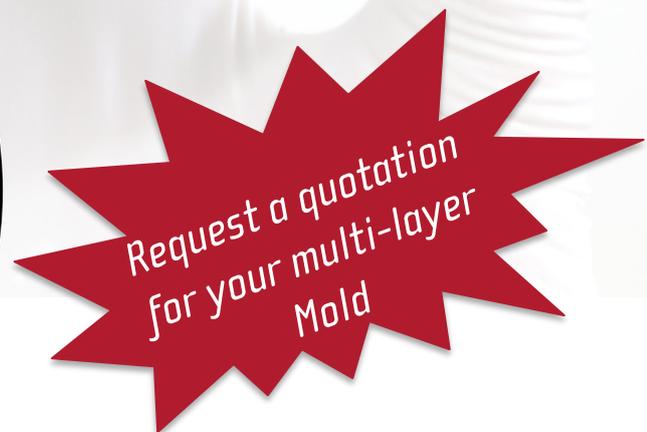
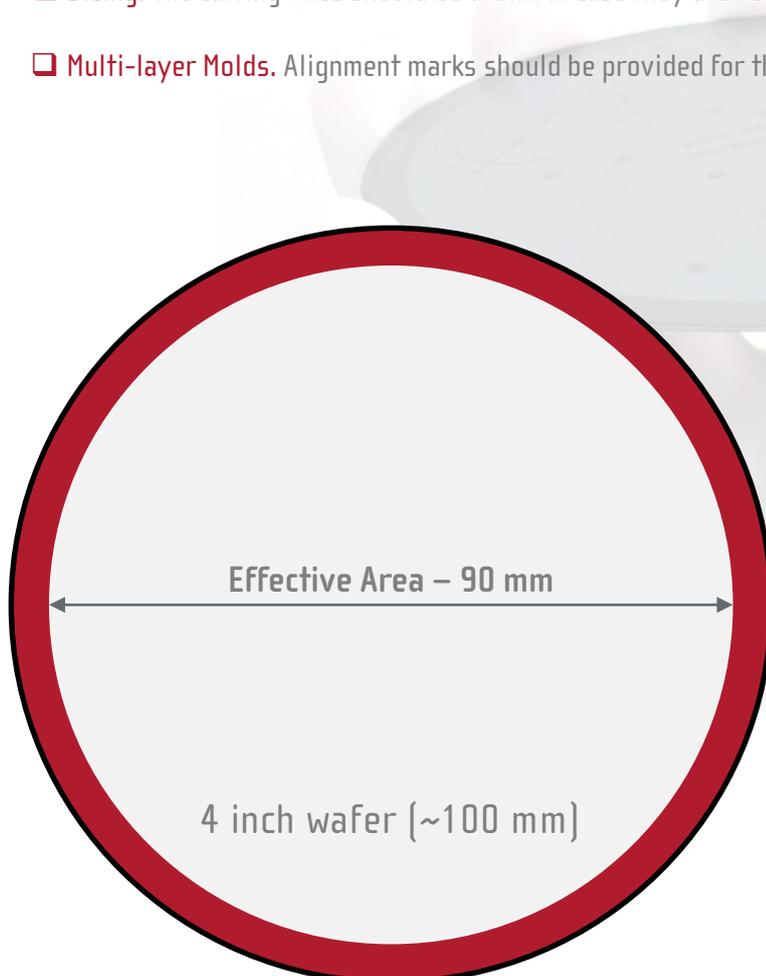
» Basic microstructure layout

Microstructure layout should be provided by customers in an appropriate file format (.CIF) or they can be adapted to a correct format by MicruX.

After the revision of the layout by MicruX, previously to the manufacturing, a pdf file will be provided to customer for the final approval of the design.

The main aspects to be considered in the design of the microstructures:

- ❑ **File format:** *CIF files*. Other formats as DXF may be accepted. All the structures should have closed contours. Any adaptation by MicruX of the provided file will bring an extra charge.
- ❑ **Effective area.** Layout must be fixed on *90 mm* diameter of the wafer.
- ❑ **Dicing.** The cutting lines should be drawn in case they are needed.
- ❑ **Multi-layer Molds.** Alignment marks should be provided for the different layers.





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