

Mask Making

SMFL Mask Making

Current Mask Queue

Forms

- [Mask Order Request Form \(pdf\)](#)
- [Guide to Filling out the Mask Order Request Form \(pdf\)](#)

Historical

RIT has been making masks for many years. It started with with [rubylith](#) and a homemade reduction camera system using silver halide emulsion plates.

We then moved onto a Mann Pattern Generator which served us well for many years.

In 1989, RIT acquired a MEBES I electron beam maskmaking system which was housed in the newly constructed Perkin-Elmer e-beam Laboratory. This system wrote many masks and was eventually replaced in 2000 with a MEBES III donated by Photronics.

The MEBES III system was capable of writing plates up to 7" with a 0.25 μ m spot size.

In 2016, we acquired a [Heidelberg DWL 66+ exposure system](#). It can be used to make masks or for direct write on substrates.

Current System

The [Heidelberg DWL66+](#) system is used to write masks. The exposure wavelength is 405 nm (solid state laser)

We have the following substrates in stock - others can be purchased.

- 5" x 5" x 0.090" Soda Lime plates coated with AZ1500 positive resist.
- 6" x 6" x 0.120" Quartz plates coated with AZ1500 positive resist.

Current Pricing

- [Internal Customers\(pdf\)](#)
- [External Customers\(pdf\)](#)

Disclaimers

- Once a mask has been delivered, the customer is responsible for inspection and acceptance. If you process in the SMFL with a mask that is not right, but did not inspect, tool charges will not be reversed. We can not be held responsible for wafers lost due to processing with an incorrect mask.
- We will gladly make a new mask to correct any fracturing, limit errors on our part. If you make a mistake in your design, we will make every effort to re-write your mask as quickly as possible, you will be charged for the re-write.

Procedure

1. Fill out a SMFL Mask Order Form. For help in filling out the form see the [Guide document \(pdf\)](#)
 2. Submit your mask file.
 3. You will be contacted with any questions about your mask and you will be given an expected delivery date and a quotation on the cost. Return the quotation with your signature and method of payment.
 4. You can check on the status of your mask in the [Mask Queue](#).
 5. You can find your mask in the delivery box in Gowning.
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Please contact [T. Grimsley](#) for help in submitting your job and a quote. Delivery is typically around 7 to 10 days depending on the mask queue and the status of the tool.