

Instructions for ordering photomasks at Toppan Photomasks, Inc.

To ensure data is clean and provide a single point of contact for ordering, we request all UCSB jobs use the following flow:

- Send data, instructions and PO/credit card information to Tim Stayt/Olga Thompson at Digidat Inc.
 - Digidat - digidat@digidatservices.com (626) 440 0010
 - Digidat will process job and review the data, this includes:
 - Data translation to GDSII
 - MaskCheck – Check that data is photomask ready
 - Array of Complete Die
 - Sizing
 - Addition of fiducials or standard reticle alignments
 - Plots for Approval
 - If the following edits are required, an additional fee of \$50 per photomask will be required.
 - Single die split into layers and arrayed.
 - Reversal of patterns
 - Fixing of data (e.g. data on data)
 - Boolean Functions
 - Layout / Edits
 - Digidat will forward a write ready jobdeck to Toppan Photomasks who will manufacture the photomasks and ship directly to UCSB using Toppan's FedEx account.
 - For digitizing services, Digidat will digitize data at rate of \$125/hr
- For shipping to UCSB , please specify on the order form one of the addresses below:

UCSB /Nanofabrication Facility
ECB Room 1109B
Santa Barbara, CA 93106

California NanoSystems Institute
3241 Elings Hall Bldg 266, UCSB
Santa Barbara, CA 93106

We created this partnership to ensure UCSB users receive the highest possible service. If there are any questions, please don't hesitate to contact me directly.

Best regards,

Paul Walker

Account Manager

Toppan Photomasks, Inc.

Office: (949) 661 1116

Fax: (949) 661 1572

Cell: (818) 469 6187

2920 Coronado Drive
 Santa Clara, Ca 95054
www.photomask.com

To: Brian Thibeault
From: Paul Walker
Date: April 11, 2016
Re: Request for Quotation
Quotation: # UCSB041116
Quotation Type: Individual Part
Intended Manufacturing Site: Santa Clara
Customer ID: 1928
Global/Regional/Site quote: RR
New Quote/Quote Revision: Revised QMIS DCN#: USSL-1928/QU2

Brian Thibeault
 UC Santa Barbara
 Santa Barbara, Ca
 93106-5050

Dear Brian,

Thank you for the opportunity to present this quotation on your photomask requirements.
 The quotation # "UCSB041116", covering the products/services below, is as follows: (Areas highlighted in yellow represent changes to previous quote)

Product to be manufactured for UC Santa Barbara

Grade	5090A	5090B	5090C	5090D	5090E	5090F
Product Type	5x	5x	5x	5x	5x	5x
Plate size	5"x5"x 090' Qtz	5"x5"x 090' Qtz	5"x5"x 090' Qtz	5"x5"x 090' Qtz	5"x5"x 090' Qtz	5"x5"x 090' Qtz
Plate Flatness	2µm	2µm	2µm	2µm	2µm	2µm
Write tool	C2564 or better	C2564 or better	C2564 or better	C2564 or better	A3000 or better	A3900 or better
Minimum Feature	1.2 um	1.2 um	1.2 um	1.2 um	0.8µm	0.6 um
Defect	0>3µm	0>1µm	0>1µm	0>1µm	0 > 3µm	0>3µm
CD Tolerance	Guaranteed	+/- 0.25µm	+/- 0.10µm	+/- 0.05µm	+/-0.1um	+/-0.1um
CD Uniformity	Guaranteed	+/- 0.30µm	+/- 0.15µm	+/- 0.15µm	+/- 0.1um	+/-0.1um
Registration	Guaranteed	+/- 0.25µm	+/- 0.10µm	+/- 0.05µm	Guaranteed	Guaranteed
Min. Address unit	≥0.05µm	≥0.05µm	≥0.05µm	≥0.05µm	≥0.05µm	≥0.05µm
Pellicle	No	No	No	No	No	No
Price	\$520	\$540	\$565	\$610	\$700	\$825

Grade	6250A	6250B	6250C	6250D
Product Type	4x ASML 248nm	4x ASML 248nm	4x ASML 248nm	4x ASML 248nm
Plate size	6"x6"x 250' Qtz	6"x6"x 250' Qtz	6"x6"x 250' Qtz	6"x6"x 250' Qtz
Plate Flatness	2µm	2µm	2µm	2µm
Write tool	C2564 or better	C2564 or better	A3900 or better	A3900 or better
Minimum Feature on mask	1µm	1µm	0.6µm	0.6µm
Defect	0 > 3µm	0 > 1µm	0 > 3µm	0 > 1µm
CD Tolerance	+/-0.075um	+/-0.075um	+/-0.075um	+/-0.075um
CD Uniformity	+/- 0.075um	+/- 0.075um	+/- 0.075um	+/- 0.075um
Registration	Guaranteed	Guaranteed	Guaranteed	Guaranteed
Min. Address unit	>0.05µm	>0.05µm	>0.005µm	>0.005µm
Pellicle	No	No	No	No
Price	\$700	\$750	\$950	\$1025

Grade	6250E	6250F	6250G
Product Type	4x ASML 248nm	4x ASML 248nm	4x ASML 248nm
Plate size	6"x6"x 250' Qtz	6"x6"x 250' Qtz	6"x6"x 250' Qtz
Plate Flatness	2µm	2µm	2µm
Write tool	A4300	A4300	A3000 or better
Minimum Feature on mask	0.3µm	0.3µm	0.8µm
Defect	0 > 3µm	0 > 1µm	0 > 3µm
CD Tolerance	+/-0.075um	+/-0.075um	+/-0.075um
CD Uniformity	+/- 0.075um	+/- 0.075um	+/- 0.075um
Registration	Guaranteed	Guaranteed	Guaranteed
Min. Address unit	>0.005µm	>0.005µm	>0.05µm
Pellicle	No	No	No
Price	\$1525	\$1625	\$800

Prices include: data conversion from supplied GDSII data; eMaskview, and automatic inspection on products with defect specifications <3µm. Gross visual inspection on defect specifications ≥3µm and shipping at Toppan's expense via FedEx.

TOPPAN PHOTOMASK INC. TERMS AND CONDITIONS:

TERM OF QUOTE:

Effective date: April 11, 2016

REVISION OF QUOTE:

Toppan Photomasks, Inc. may revise this quote upon completion of the initial or subsequent orders if the product content or service required is significantly different from the original estimate.

Shipment:

Shipment from Toppan Photomask Inc: First two masks to be ready for shipment **72** hours after receipt of all data, plot approval, if required, and all required documentation. The shipment will then go on the next available pickup via FedEx at Toppan's expense. Succeeding masks to be shipped 2 per day until order is complete. Sunday, and Holidays are not considered shipping, or manufacturing days. Acceptance is dependent upon available site loading at time of order submission.

Expedited shipment

(pending shop capacity at time of order)

First photomask due to ship in 48 hours after receipt of data and paperwork, add 50% to above price.

First photomask due to ship 24 hours after receipt of data and paperwork, add 100% to above price.

SHIPPING TERMS – The Shipping schedule applicable to each Order shall be as set forth in this Agreement or an Order issued under this Agreement. Unless otherwise specified in a Purchase Order placed hereunder, shipping requirements include the following:

- 1) Shipment terms shall be DDP "delivered duty paid"
- 2) Transportation charges shall be Freight PREPAID to Company, except in the following cases:
 - a. when Company requires a transportation method other than Suppliers provided standard method of transport
- 3) Where applicable, parties shall incur responsibilities as importer of record and payment of duties and taxes, as such:
 - a. For USA domestic and international shipments destined to the USA Company location, Supplier will be the importer of record and responsible for applicable duties and taxes.
 - b. For shipments destined to non-USA Company locations, Company will be the importer of record and responsible for applicable import duties and taxes.
- 4) According to the DDP term, title and risk of loss and damage to product purchased by Company under this agreement shall vest in Company when the product has been delivered to designated Company location.
- 5) Supplier shall be responsible for tracking all shipments until the shipment has reached the designated Company destination.

If during the course of this Agreement, Supplier determines that Supplier will no longer be able to ship within the above interval, Supplier shall immediately notify Company's buyer and Company's Technical Representative to that effect. Supplier shall also

notify Company's buyer and Company's Technical Representative as soon as it becomes apparent, if Supplier is unable to meet the shipping date for an Order.

COMPLIANCE MATTERS

Each party will comply with all applicable U.S. and foreign import and export laws and regulations, including, without limitation, the U.S. Export Administration Regulations (EAR), and the International Traffic in Arms Regulations (ITAR). Customer acknowledges that products supplied by Seller are considered "dual-use" goods, as they have the potential to be used in both civil and military applications dependent upon the intended utilization of the products by Customer. Since the products will be custom-manufactured by Seller based on technical data provided by Customer, and Seller may or may not be aware of the end-use applications of the semiconductor devices to be manufactured using the products, Customer must inform Seller in writing whenever Customer's data and/or the products manufactured for Customer are controlled by any applicable U.S. or other foreign laws and regulations. If Customer requests that Seller export any products from the country in which such products will be manufactured, Seller may request, and Customer will provide, written assurances to include the end-use application of the products, so as to ensure that the products will not be used in, or for, any restricted end-uses (as defined under U.S. or other applicable law), so as to assist in determining if an export license may be required to a specific destination country. If an export license is required, Customer will supply Seller all necessary technical information, so as to make application to the respective governmental authorities for an export license. Note that the effort required to obtain an export license may take up to three months; therefore, the coordination of such activity should be done in the most proactive manner as possible, so as to avoid delays in the delivery of product.

EXTENT OF LIABILITY:

Seller's liability with respect to any subject matter of this document under any contract, negligence, strict liability or other theory whether for services provided, products delivered or for non-delivery of products or other product or service, shall in no event be greater in amount than the purchase price paid to Seller for the product in respect of which such damages are claimed. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY PUNITIVE, CONSEQUENTIAL, SPECIAL OR INCIDENTAL DAMAGES, OR LOST PROFITS, WHETHER OR NOT CLAIM SAID IS BASED UPON SELLER'S NEGLIGENCE IN, OR STRICT LIABILITY FOR, THE DESIGN, MANUFACTURE, DELIVERY AND/OR SALE OF PRODUCTS HEREUNDER OR OTHER LEGAL THEORY, AND EVEN IF THE SELLER HAS BEEN MADE AWARE OF THE POSSIBILITY OF SUCH DAMAGES.

PAYMENT TERMS:

Net 30 days

ORDER CANCELLATION POLICY:

If Buyer cancels an order after Seller begins work on the applicable products, Buyer will compensate Seller for the work performed through receipt of notice thereof. Seller will invoice Buyer for the applicable charges under Seller's standard pricing terms itemized below or as otherwise mutually agreed by Buyer and Seller.

Customer Service	10%
Tech Planning	15%
Write	25%
Process	5%
Registration	10%
1st Inspection (1)	10%
2nd Inspection (1)	15%
Audit	5%
Pellicle	5%

PRODUCT WARRANTY:

Seller warrants that the services and/or products delivered hereunder (including but not limited to photomasks, the application of optical proximity correction and other design services) will meet Seller's standard specification for the services or products, or the applicable specifications that have been expressly agreed to in writing by Customer and Seller (if any), for 90 days after delivery. EXCEPT AS EXPRESSLY PROVIDED IN THE PRECEDING SENTENCE, SELLER MAKES NO, AND HEREBY DISCLAIMS ALL, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. Customer assumes all risk and liability resulting from receipt of the services or use of the products delivered hereunder, whether used singly or in combination with other products. Credit shall be allowed upon return of said products or the output of said services, if any, but only if returned to the designated location upon obtaining specific authorization from Seller. Failure to give notice of the claim within the warranty period shall constitute a waiver of all claims in respect of products or services. The remedy hereby provided shall be the exclusive and sole remedy of Customer.

Seller will not be responsible for the integrity of any mask returned for cleaning, repair or repelliclization. While Seller will make every commercially reasonable effort to provide the service requested, mask damage could occur during the aforementioned processes. Mask replacement will be the customer's responsibility. Issues concerning any damage will be dealt with on an individual basis.

Third-party supplier:

From time to time, Seller may, at its sole discretion, elect to use a third-party supplier to provide photomasks and/or services to Buyer. Buyer authorizes Seller to supply the confidential information of Buyer (including, but not limited to, design data and manufacturing specifications) to the third-party supplier for the sole purpose of satisfying orders placed under this quote. All such third-parties will be bound by confidentiality obligations no less restrictive than those imposed on Seller by Buyer. All other terms of this quote shall remain in full force and effect regardless of the source of the photomasks and/or services

Please feel free to call me at anytime with questions or concerns at 949-661 1116.

Best Regards,

Paul Walker
Regional Account Manager Toppan Photomasks