

## Invoice

**Page:** 1 of 1  
**Run Date:** 2023-08-18  
**Run Time:** 15:10:26

**Business Unit:** COLUM  
**Voucher Number:** 05989773  
**Voucher Style:** REG  
**Vendor:** 0000083007  
**Vendor Location:** CHK-01  
 TSMC NORTH AMERICA  
 TSMC NORTH-001  
 4893 COLLECTIONS CENTER DRIVE

**Invoice Number:** UB0423060C6V  
**Invoice Date:** 2023-06-21  
**Miscellaneous:** 0  
**Freight:** 0  
**VAT:** 0  
**Sales Tax:** 0  
**Invoice Total:** 15134  
**Currency:** USD  
**Use Tax:** 0  
**VAT Not on Invoice:** 0

**Payment Terms:** CHICAGO, IL 60693  
**Control Group:** 00

**Related Voucher Number:**  
**Lease Number:**

### Voucher Line Information

| <u>Line</u> | <u>Item</u> | <u>Description</u>                   | <u>Qty</u> | <u>Unit Price</u> | <u>UOM</u> | <u>Amt</u> | <u>Distribution Information</u> |             |                |                 |                |                   |            |
|-------------|-------------|--------------------------------------|------------|-------------------|------------|------------|---------------------------------|-------------|----------------|-----------------|----------------|-------------------|------------|
| 1           |             | Mask Set &<br>Pilot Wafer<br>Lot: 0. | 1          | 15134             | LO         | 15134      | <u>Distrib#</u>                 | <u>Acct</u> | <u>Project</u> | <u>Activity</u> | <u>Segment</u> | <u>Initiative</u> | <u>Amt</u> |
|             |             |                                      |            |                   |            |            | 1                               | 68100       | GG012664       | 01              | KLS30          | 60908             | 15134      |



TSMC North America  
2851 Junction Avenue,  
San Jose, CA 95134,  
USA  
TEL: 1-408-382-8000

FAX: 1-408-382-8008

# INVOICE

INVOICE NO.

UB0423060C6V

INVOICE DATE

06/21/2023

(Security C -TSMC Internal)

SHIP TO :

Columbia University  
No delivery

USA  
ATTN: Mr. Ken Shepard  
TEL :  
FAX :  
Dest. Broker:

PAYMENT TERMS:Net 30 days after invoicing

DELIVERY TERMS:EXW-TSMC

BILL TO :

Trustees Of Columbia University  
PROFESSOR KEN SHEPARD-KS1191  
530 West 120th Street, FL 10 RM/STE 1001  
New York, NY10027  
USA

ATTN: Kenneth Shepard

SHIP VIA:

ORIGIN: TAIWAN

RECEIVED  
6/22/23

| ITEM | CUSTOMER ORDER/PRODUCT                             | TSMC SALES ORDER/PRODUCT/DESCRIPTION             | UNIT PRICE/UNIT | QUANTITY | AMOUNT  |
|------|--|--|-----------------|----------|---------|
| 1    | PO:COLUM-0000220324<br>IBIS/BISC<br>PO Line:ADDL   | 6" MASK FOR WAFER<br>UB0423050495<br>TMPT08-009B | 797.00/PC       | 1.00     | 797.00  |
| 2    | PO:COLUM-0000220324<br>IBIS/BISC<br>PO Line:by NRE | 6" MASK FOR WAFER<br>UB0423050495<br>TMPT08-020A | 0.00/PC         | 1.00     | 0.00    |
| 3    | PO:COLUM-0000220324<br>IBIS/BISC<br>PO Line:ADDL   | 6" MASK FOR WAFER<br>UB0423050495<br>TMPT08-020B | 797.00/PC       | 1.00     | 797.00  |
| 4    | PO:COLUM-0000220324<br>IBIS/BISC<br>PO Line:ADDL   | 6" MASK FOR WAFER<br>UB0423050495<br>TMPT08-2A0A | 797.00/PC       | 1.00     | 797.00  |
| 5    | PO:COLUM-0000220324<br>IBIS/BISC<br>PO Line:ADDL   | 6" MASK FOR WAFER<br>UB0423050495<br>TMPT08-306B | 918.00/PC       | 1.00     | 918.00  |
| 6    | PO:COLUM-0000220324<br>IBIS/BISC<br>PO Line:ADDL   | 6" MASK FOR WAFER<br>UB0423050495<br>TMPT08-308B | 797.00/PC       | 1.00     | 797.00  |
| 7    | PO:COLUM-0000220324<br>IBIS/BISC<br>PO Line:ADDL   | 6" MASK FOR WAFER<br>UB0423050495<br>TMPT08-309B | 918.00/PC       | 1.00     | 918.00  |
| 8    | PO:COLUM-0000220324<br>IBIS/BISC<br>PO Line:ADDL   | 6" MASK FOR WAFER<br>UB0423050495<br>TMPT08-384B | 5158.00/PC      | 1.00     | 5158.00 |
| 9    | PO:COLUM-0000220324<br>IBIS/BISC<br>PO Line:ADDL   | 6" MASK FOR WAFER<br>UB0423050495<br>TMPT08-385B | 2476.00/PC      | 1.00     | 2476.00 |



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USA  
**TEL: 1-408-382-8000**

**FAX: 1-408-382-8008**

# INVOICE

INVOICE NO.

**UB0423060C6V**

INVOICE DATE

**06/21/2023**

**(Security C -TSMC Internal)**

**SHIP TO :**

Columbia University  
No delivery

USA

ATTN: Mr. Ken Shepard

TEL :

FAX :

Dest. Broker:

PAYMENT TERMS:Net 30 days after invoicing

DELIVERY TERMS:EXW-TSMC

**BILL TO :**

Trustees Of Columbia University  
PROFESSOR KEN SHEPARD-KS1191  
530 West 120th Street, FL 10 RM/STE 1001  
New York, NY10027  
USA

ATTN: Kenneth Shepard

SHIP VIA:

ORIGIN: TAIWAN

| ITEM | CUSTOMER ORDER/PRODUCT | TSMC SALES ORDER/PRODUCT/DESCRIPTION | UNIT PRICE/UNIT | QUANTITY | AMOUNT |
|------|------------------------|--------------------------------------|-----------------|----------|--------|
|------|------------------------|--------------------------------------|-----------------|----------|--------|

|              |                     |   |            |      |         |
|--------------|---------------------|---|------------|------|---------|
| 10           | PO:COLUM-0000220324 | 6" MASK FOR WAFER<br>UB0423050495<br>IBIS/BISC<br>TMPT08-386B | 2476.00/PC | 1.00 | 2476.00 |
| PO Line:ADDL |                     |   |            |      |         |

GRAND TOTAL

USD

15134.00

THANK YOU FOR YOUR ORDER.

TOTAL AMOUNT DUE:

USD

15134.00

Payment please wire to:

Bank of America  
1850 Gateway Blvd, Concord, CA 94520  
USA  
ABA: 026009593  
Account Name: TSMC North America  
Account No.: 1233005515

Check please pay to:

TSMC North America  
4893 Collections Center Drive, Chicago, IL 60693 USA

FOR INVOICE DETAIL, PLEASE CONTACT Sofia Lee

Shipped from:

tsmc Hsinchu  
6, Creation Rd. II,  
Hsinchu Science Park,  
Hsinchu 300-77, Taiwan  
Tel: Fax:



# Purchase Order

## Columbia University

615 West 131st Street  
Studebaker Building  
3rd Floor  
New York NY 10027  
United States

**Supplier:** 0000083007  
TSMC NORTH AMERICA  
4893 COLLECTIONS CENTER DRIVE  
CHICAGO IL 60693

## Dispatch via Print

| Purchase Order      |                 | Date         | Revision | Page |
|---------------------|-----------------|--------------|----------|------|
| COLUM-0000251562    |                 | 08/17/2023   |          | 1    |
| Payment Terms       | Freight Terms   |              | Ship Via |      |
| Net 30              | FOB Destination |              | Common   |      |
| Requestor Email     |                 |              | Currency |      |
| ep2170@columbia.edu |                 |              | USD      |      |
| Requestor           |                 | Phone        |          |      |
| Eugene Profanato    |                 | 212/854-3961 |          |      |

**Ship To:** 1045070701  
550 West 120th Street  
Northwest Corner Building  
FL 07  
RM/STE 0701  
New York NY 10027  
United States

**Attention:** PROFESSOR KEN SHEPARD KS1068

**Bill To:** 530 West 120th Street  
Schapiro Cepsr  
FL 10  
RM/STE 1001  
New York NY 10027  
United States

**Tax Exempt?** Y **Tax Exempt ID:** EXEMPT

| Line-Sch | Item/Description  | Quantity | UOM | PO Price  | Extended Amt | Due Date   |
|----------|---|----------|-----|-----------|--------------|------------|
| 1- 1     | Mask Set & Pilot Wafer Lot: 0.13<br>UM CMOS High Voltage Mixed Signal<br>based Low Power BCD Triple Gate<br>FSG CU 1P6M 39L SALICIDE NBL/PBL<br>EPI<br>1.5/3.3/5/10/20/28/36/Vgl.5/3.3/5V<br>- 12 inch *Per Quote<br>UB04-2022-002* | 1.00     | LO  | 64,375.00 | 64,375.00    | 08/17/2023 |

**Schedule Total** 64,375.00

<<=====

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\*\*\*THIS CO-02 IS TO ADD ADDITIONAL ITEMS AS LISTED BELOW BASED ON 2023 PRICING IN EFFECT\*\*\*

\*\*\*1 EA FLIP- CHIP NRE \$8,357.00 EA \$ 8,357.00 EXT \*\*\*

\*\*\*5 EA BUMPING CHARGES \$ 234.00 EA \$ 1,170.00 EXT \*\*\*

\*\*\*4 EA BIN A \$ 797.00 EA \$ 3,188.00 EXT \*\*\*

\*\*\*2 EA BIN D \$ 918.00 EA \$ 1,836.00 EXT \*\*\*

\*\*\*1 EA BIN F \$ 2,476.00 EA \$ 2,476.00 EXT \*\*\*

\*\*\*2 EA CLEAR G \$ 5,158.00 EA \$ 10,316.00 EXT \*\*\*

\*\*\*4 EA 12" WAFERS \$ 3,703.20 EA \$ 14,812.80 EXT \*\*\*

\*\*\* TOTAL \$42,155.80 \*\*\*

\*\*\* TOTAL CO-02 \$42,155.80 + PO \$215,073.20 = TOTAL VALUE OF PO \$257,229 \*\*\*

+++++++>>>

**Item Total** 64,375.00

\*\*\*THIS IS A NEW PO FOR CLOSED PO. 0000220324-02 WITH A REMAINING BALANCE OF \$64,375.00 \*\*\*

\*\*\*DO NOT ENTER / PROCESS / DUPLICATE SOW \*\*\* THIS PO IS FOR PAYMENT ONLY \*\*\*

\*\*\*PLEASE SEND ALL INVOICES & QUESTIONS FOR THIS PO TO: CISE@COLUMBIA.EDU \*\*\*

\*\*\*ITEMS ARE NEW CAPITAL COMPONENTS TO FAB0000044 NON TAGGABLE \*\*\*

\*\*\* KS1068 \*\*\*

Purchase Order to pay for the invoices listed below, plus any additional invoices for the balance of this PO only.

Pricing and specification only per invoices:

UB04230704VS, dated 07/07/2023 \$9,527.00 USD  
UB0423060C6V, dated 06/21/2023 \$15134.00 USD  
UB04230702FD, dated 07/04/2023 \$29625.60 USD

Authorized Signature



## Purchase Order

### Columbia University

615 West 131st Street  
Studebaker Building  
3rd Floor  
New York NY 10027  
United States

**Supplier:** 0000083007  
TSMC NORTH AMERICA  
4893 COLLECTIONS CENTER DRIVE  
CHICAGO IL 60693

Dispatch via Print

| Purchase Order      |                 | Date         | Revision | Page |
|---------------------|-----------------|--------------|----------|------|
| COLUM-0000251562    |                 | 08/17/2023   |          | 2    |
| Payment Terms       | Freight Terms   |              | Ship Via |      |
| Net 30              | FOB Destination |              | Common   |      |
| Requestor Email     |                 |              | Currency |      |
| ep2170@columbia.edu |                 |              | USD      |      |
| Requestor           |                 | Phone        |          |      |
| Eugene Profanato    |                 | 212/854-3961 |          |      |

**Ship To:** 1045070701  
550 West 120th Street  
Northwest Corner Building  
FL 07  
RM/STE 0701  
New York NY 10027  
United States

**Attention:** PROFESSOR KEN SHEPARD KS1068

**Bill To:** 530 West 120th Street  
Schapiro Cepsr  
FL 10  
RM/STE 1001  
New York NY 10027  
United States

**Tax Exempt?** Y **Tax Exempt ID:** EXEMPT

| Line-Sch | Item/Description | Quantity | UOM | PO Price | Extended Amt | Due Date |
|----------|------------------|----------|-----|----------|--------------|----------|
|----------|------------------|----------|-----|----------|--------------|----------|

Remaining balance after above invoices are paid = \$10,088.40 USD

No further purchases are authorized by this Purchase Order.

**Total PO Amount**

64,375.00

This Purchase Order is governed by Columbia University's Terms and Conditions located at:

**Authorized Signature**



## Purchase Order

Dispatch via Print

### Columbia University

615 West 131st Street  
Studebaker Building  
3rd Floor  
New York NY 10027  
United States

**Supplier:** 0000083007  
TSMC NORTH AMERICA  
4893 COLLECTIONS CENTER DRIVE  
CHICAGO IL 60693

| Purchase Order      | Date            | Revision     | Page |
|---------------------|-----------------|--------------|------|
| COLUM-0000251562    | 08/17/2023      |              | 3    |
| Payment Terms       | Freight Terms   | Ship Via     |      |
| Net 30              | FOB Destination | Common       |      |
| Requestor Email     |                 | Currency     |      |
| ep2170@columbia.edu |                 | USD          |      |
| Requestor           |                 | Phone        |      |
| Eugene Profanato    |                 | 212/854-3961 |      |

**Ship To:** 1045070701  
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**Attention:** PROFESSOR KEN SHEPARD KS1068

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RM/STE 1001  
New York NY 10027  
United States

**Tax Exempt?** Y **Tax Exempt ID:** EXEMPT

| Line-Sch | Item/Description | Quantity | UOM | PO Price | Extended Amt | Due Date |
|----------|------------------|----------|-----|----------|--------------|----------|
|----------|------------------|----------|-----|----------|--------------|----------|

<https://www.finance.columbia.edu/sites/default/files/content/Finance%20Documents/Buying%20and%20Payin%20g/Purchasing/Purchase%20Order%20Terms%20and%20Conditions.pdf>

These terms and Conditions supersede any other contract terms unless expressly agreed to in writing by both parties.

Authorized Signature



Mona Anis Saleh Naser &lt;man2175@columbia.edu&gt;

**Re: Request To Approve Vouchers**

1 message

**Elizabeth W. Demissie** <ewd3@columbia.edu>

Fri, Aug 18, 2023 at 4:23 PM

To: Mona Naser &lt;man2175@columbia.edu&gt;

Cc: Michelle Ashley Capuno &lt;mec2263@columbia.edu&gt;, Jennifer Guzman Pichardo &lt;jg3923@columbia.edu&gt;, Salsabeel Hamud Al-Silwi &lt;sha2137@barnard.edu&gt;, Josette Marie Content &lt;jmc2422@columbia.edu&gt;, Anais Fotsing &lt;apf2149@barnard.edu&gt;, Mariam A Naser &lt;man2182@barnard.edu&gt;, Quan Ha &lt;qh2254@barnard.edu&gt;, Mariam Sikiru &lt;mas2584@barnard.edu&gt;

These vouchers are approved in ARC

05989779

05989739

05989735

05989572

05981799

05980499

These are approved and it required Will's /SEAS approval

05989760 (Attached)

05989773 (Attached)

05975101 (Attached)

Thanks,

Liz

On Fri, Aug 18, 2023 at 3:55 PM Mona Naser &lt;man2175@columbia.edu&gt; wrote:

Hi Liz,

Can you please review and approve the following vouchers? They have all been budget checked.

05989760 (Attached)

05989773 (Attached)

05975101 (Attached)

05989779

05989739

05989735

05989572

05981799

05980499

Thank you!

Best,

Mona

---

**Mona Naser**

Financial Analyst

Columbia University | [Columbia Nano Initiative](#)[530 West 120th Street](#), 1001 Schapiro/CEPSR, New York, NY 10027(212) 853 - 4379 | [man2175@columbia.edu](mailto:man2175@columbia.edu)

--

Elizabeth Demissie

Grants and Contracts Manager

Columbia University

8/18/23, 4:24 PM

LionMail Mail - Re: Request To Approve Vouchers

Cepsr/Schapiro Rm 1001

[530 W 120th St](#)

[New York, NY 10027](#)

Tel: 212-854-1910 Fax: 212-854-1909

Email: [ewd3@columbia.edu](mailto:ewd3@columbia.edu)

---

**3 attachments**



**V05975101 ANSYS 52000026.pdf**

263K



**V05989760 TSMC KS1191 (1).pdf**

244K



**V05989773 TSMC KS1191 (1).pdf**

248K