### 506111950 06/17/2020

## PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
KEN-HSIEN HSIEH	05/27/2020
SHIH-MING CHANG	06/02/2020
WEN LO	06/02/2020
WEI-SHUO SU	05/25/2020
HUA-TAI LIN	06/06/2020

### **RECEIVING PARTY DATA**

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.	
Street Address:	NO.8, LI-HSIN RD.6	
Internal Address:	SCIENCE-BASED INDUSTRIAL PARK	
City:	HSINCHU	
State/Country:	TAIWAN	
Postal Code:	300	

### **PROPERTY NUMBERS Total: 1**

Property Type	Number	
Application Number:	16886509	

### **CORRESPONDENCE DATA**

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

**Phone:** 4352521360

Email:gschneider@mabr.comCorrespondent Name:R. BURNS ISRAELSENAddress Line 1:MASCHOFF BRENNAN

Address Line 2: 1389 CENTER DR. SUITE 300
Address Line 4: PARK CITY, UTAH 84098

ATTORNEY DOCKET NUMBER:	DOCKET NUMBER: T1516.10627US02	
NAME OF SUBMITTER:	IBMITTER: R. BURNS ISRAELSEN	
SIGNATURE:	/R. Burns Israelsen, Reg. No. 42685/	
DATE SIGNED:	06/17/2020	

PATENT REEL: 052967 FRAME: 0379

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# **Total Attachments: 2**

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PATENT REEL: 052967 FRAME: 0380

### **ASSIGNMENT**

This assignment agreement is applicable to an invention entitled (Invention Title)				
TUNABLE ILLUMINATOR FOR LITHOGRAPHY SYSTEMS				
The PATENT RIGHTS referred to in this agreement are:				
(check one) a patent application for this invention, executed by the ASSIGNOR(S)				
concurrently with this assignment.				
☑U.S. patent application Serial No. 16/886,509 , filed May 28, 2020				
a U.S. patent application based on PCT International Application				
Nofiled on (date)(U.S. patent application				
Serial No, if known).				
U.S. patent No, issued				
The PATENT RIGHTS also include all divisions, reissues, continuations and extensions of				
the patents and patent applications identified above.				
The PATENT RIGHTS assigned under this agreement are:				
☑U.S. patent rights only.				
The $ASSIGNOR(S)$ referred to in this agreement is (or are) the inventor(s) whose signatures				
appear on page 2 of this Assignment and any Supplemental Sheet(s).				
The ASSIGNEE referred to in this agreement is:				
(Name of Assignee) TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.				
(Address) NO.8, LI-HSIN RD.6, SCIENCE-BASED INDUSTRIAL PARK, HSINCHU,				
TAIWAN 300, R.O.C.				
The ASSIGNEE is:				
(check one)  ☐ An individual.				
A Partnership.				
☐ A Corporation of				
other)				
The ASSIGNOR(S), in consideration of \$10.00 paid by the ASSIGNEE, and other good and				
valuable consideration, receipt of which is acknowledged, hereby assign(s) the following				
rights to the ASSIGNEE, its successors and assigns:				

the full and exclusive right to the invention;

the entire right, title and interest in and to the PATENT RIGHTS;

the right to sue and recover for any past infringement; and

the right to claim priority under 35 USC 119, 35 USC 120, or any other applicable provisions, based on any earlier patent applications for this invention.

PATENT REEL: 052967 FRAME: 0381 tdehstelig 20/95/15 13:07:20

# THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO ASSIGNEE: TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD. INVENTION TITLE: TUNABLE ILLUMINATOR FOR LITHOGRAPHY SYSTEMS

As to all U.S. patent applications assigned under this agreement, the ASSIGNOR(S) hereby authorize(s) and request(s) the Commissioner of Patents and Trademark to issue all Letters Patent to the ASSIGNEE as the assignee of the entire right, title and interest, for the sole use and enjoyment of said ASSIGNEE, its successors and assigns.

Further, the ASSIGNOR(S) agree(s) to communicate to said ASSIGNEE, or its representatives, any fact known to the ASSIGNOR(S) with respect to said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause and all Letter Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention.

The ASSIGNOR(S) authorize(s) the attorneys and agents who have the power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filing date in this document after it has been executed.

Ken-Hsien HSIEH	Ken Hoved Rich	2020. K. 27
Name of sole or first inventor	Signature	Date
Shih-Ming CHANG Name of second inventor, if any	Signature S	<u> かんの6.02 .</u> Date
Wen LO	Dendo	<del>70,70,06,02</del>
Name of third inventor, if any	Signature	Date
Wei-Shuo SU	Wei-Shuo SU	2020 . 5.25 .
Name of fourth inventor, if any	Signature	Date
Hua-Tai LIN	3/2/L	70%,06,00
Name of fifth inventor, if any	Signature	Date

PATENT REEL: 052967 FRAME: 0382

RECORDED: 06/17/2020