

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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EPAS ID: PAT5220997

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CHIN HAN LIN	12/07/2017
WEIPING LI	12/11/2017
XIAOFENG FAN	12/07/2017
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<b>Name:</b>	APPLE INC.
<b>Street Address:</b>	ONE APPLE PARK WAY
<b>City:</b>	CUPERTINO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95014
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16180041
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<b>ATTORNEY DOCKET NUMBER:</b>	P35139USC1/1020-1204.8
<b>NAME OF SUBMITTER:</b>	MIRIAM NAGAWKAR
<b>SIGNATURE:</b>	/MIRIAM NAGAWKAR/
<b>DATE SIGNED:</b>	11/05/2018
<b>Total Attachments: 2</b>	
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## ASSIGNMENT

THIS PATENT ASSIGNMENT is made from the inventors named below (hereinafter, Assignors) to APPLE INC., a California corporation, having a place of business at 1 Infinite Loop, Cupertino, CA95014, USA (hereinafter, Assignee).

WHEREAS the Assignors have made an invention that is described in the attached patent application CREATING ARBITRARY PATTERNS ON A 2-D UNIFORM GRID VCSEL ARRAY (hereinafter, the Invention),

NOW, THEREFORE, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration paid to the Assignors, the receipt and sufficiency of which are hereby acknowledged, the Assignors agree to assign, and hereby do assign, to the Assignee the entire right, title and interest in and to the Invention, including, without limitation, the above-mentioned patent application and all other provisional and non-provisional applications deriving from the above-mentioned patent application, and including any original and/or reissued Letters Patent of the United States granted for the Invention and any divisions, reissues, continuations, continuations-in-part and extensions of any such patent application(s), and including any patents or other forms of protection of industrial property that may be granted in relation to the Invention in any other country, and including the rights to file and prosecute all applications for patents and other forms of protection of industrial property in the United States and other countries and to claim priority from the above-mentioned patent application in the United States and in any other country, and including the subject matter of any and all claims which may be obtained in such patents and the right to enforce such patents.

The Assignors hereby authorize and request the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from the above-mentioned patent application and any divisions, reissues, continuations, continuations-in-part thereof to the Assignee, as Assignee of the entire interest, and likewise authorize officials of other countries to issue patents and other forms of industrial property protection to the Assignee.

The Assignors hereby covenant that they have full right to convey the entire interest herein assigned, and that they have not executed and will not execute any agreement in conflict herewith.

Each of the Assignors agrees to execute all papers in connection with the above-mentioned patent application and any applications filed as divisions, reissues, continuations, or continuations-in-part thereof or otherwise deriving from the above-mentioned patent application, including separate assignments in connection with such applications, that the Assignee may deem desirable for the purposes of obtaining, protecting and enforcing its rights in the Invention.

Each of the Assignors agrees to communicate to the Assignee or representatives thereof any facts known to him or her respecting the Invention and improvements thereof, and will, upon request, but without expense to him or her, testify in any legal proceedings regarding the invention and provide any other assistance deemed necessary by the Assignee to obtain, protect and enforce its rights in the Invention.

Docket: P35139US1/1020-1204.J

This Assignment shall be binding upon the heirs, executors, administrators, and assigns of each of the Assignors, and shall inure to the benefit of the heirs, executors, administrators, successors and assigns of the Assignee.

IN WITNESS WHEREOF, the Assignors have executed this Assignment on the date or dates indicated below:

First inventor: Chin Han Lin, citizen of Taiwan

Inventor signature: Chin Han Lin Date: 2017/12/07

Residence: Cupertino, California, USA

Second inventor: Weiping Li, citizen of ~~China~~ <sup>U.S.A</sup>

Inventor signature: Weiping Li Date: 12/11/2017

Residence: Pleasanton, California, USA

Third inventor: Xiaofeng Fan, citizen of USA

Inventor signature: Xiaofeng Fan Date: 2017/12/07

Residence: San Jose, California, US