e Honorable Commissioner c. 103302 Please record the attached original documents or corof conveying party(ies):  chak Ahn  onal name(s) of conveying party(ies) attached? YESXNO  of conveyance:  Assignment Merger	U.S. DEPARTMENT OF COMMERC PATENT AND TRADEMARK OFFIC
Please record the attached original documents or corof conveying party(ies):  chak Ahn  onal name(s) of conveying party(ies) attached? YESXNO  of conveyance:  Assignment Merger	y thereof.  2. Name and address of receiving party(ies): Name:  Samsung Electronics Co., Ltd.  Internal Address: Street Address: San #16 Banwol-Ri, Taean-Eup
chak Ahn  onal name(s) of conveying party(ies) attached?  YESX NO  of conveyance:  Assignment Merger	Samsung Electronics Co., Ltd.  Internal Address:  Street Address:  San #16 Banwol-Ri, Taean-Eup
onal name(s) of conveying party(ies) attached? YESXNO  of conveyance:  Assignment Merger	Internal Address:  Street Address:  San #16 Banwol-Ri, Taean-Eup
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Other Change of Name  attion Date: August 23, 2006	State: Gyeonggi-Do  Country/Zip: KOREA 445-701  Additional name(s) & address(es) attached? YESXNO
ation number(s) or patent number(s): document is being filed together with a new application, the exect Patent Application No.(s): include series code or filing date)  Additional application or patent num	B. Patent No.(s):
and address of party to whom correspondence concerning ent should be mailed:  Monica H. Choi  Law Office of Monica H. Choi	6. Total number of applications and patents involved: 1  7. Total Fee (37 CFR 3.41) \$ 40.00
P.O. Box 3424  Dublin  Ohio  Zip: 43016-0204	X EnclosedAuthorized to charge Deposit Account 50-1178  8. Should any fee adjustment be necessary to effect proper recordation, please debit or credit our Deposit Account No, as necessary.
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ent and signature.  The best of my knowledge and belief, the foregoing infinite copy of the original document.  The a H. Choi, Reg. No. 41,671  Ferson Signing  Signature  Signature	formation is true and correct and any attached copy  August 29, 2006  Date
:: :::::::::::::::::::::::::::::::::::	that and signature.  best of my knowledge and belief, the foregoing inference copy of the original document.  H. Choi, Reg. No. 41,671  Person Signing  Annual Annu

PATENT REEL: 018251 FRAME: 0881

Case No. S06-29

## **ASSIGNMENT**

Inventor(s): Jung-chak Ahn Date of Execution	Serial No.:
of Application:	Filing Date:
In consideration of One Dollar (\$1.00)	and other good and valuable considerations in

In consideration of One Dollar (\$1.00) and other good and valuable considerations in hand paid, the receipt and sufficiency whereof are hereby acknowledged, the undersigned hereby assigns to:

SAMSUNG ELECTRONICS CO., LTD, a corporation having a primary place of business in Suwon-si, Gyeonggi-do, Republic of Korea

its successors and assigns, the entire right, title and interest in the invention or improvements of the undersigned disclosed in an application for Letters Patent of the United States, entitled:

## CMOS IMAGE SENSOR HAVING SMALL OPTICAL BLACK AREA

and identified as:

Case No. S06-29

in the Law Office of Monica H. Choi and in said application and any and all other applications, both United States and foreign, which the undersigned may file, either solely or jointly with others, on said invention or improvements, and in any and all Letters Patent of the United States and foreign countries, which may be obtained on any of said applications, and in any reissue or extension of such patents, and further assigns to said assignees the priority right provided by the International Convention.

The undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to said assignees.

The undersigned hereby authorizes and requests the attorneys of record in said application to insert in this assignment the filing date and serial number of said application when officially known, and the date of execution of the application.

The undersigned warrants himself to be the owner of the entire right, title and interest in said invention or improvements and to have the right to make this assignment, and further warrants that there are no outstanding prior assignments, licenses, or other encumbrances on the interest herein assigned.

For said considerations the undersigned hereby agrees, upon the request and at the expense of said assignees, its successors and assigns, to execute any and all divisional, continuation and substitute applications for said invention or improvements, and any necessary oath, affidavit or declaration relating thereto, and any application for the reissue or extension of any Letters Patent that may be granted upon said application and any and all applications and other documents for Letters Patent in foreign countries on said invention or improvements, that said assignees, its successors or assigns may deem necessary or expedient, and for the said considerations the undersigned authorize said assignees to apply for patents for said invention or improvements in its own name in such countries where such procedure is proper and further

Case No. S06-29

agree, upon the request of said assignees, its successors and assigns, to cooperate to the best of the ability of the undersigned with said assignees, its successors and assigns, in any proceedings or transactions involving such applications or patents, including the preparation and execution of preliminary statements, giving and producing evidence, and performing any and all other acts necessary to obtain, maintain and enforce said Letters Patent, both United States and foreign, and vests all rights therein hereby conveyed in the assignees, its successors and assigns, whereby said Letters Patent will be held and enjoyed by the said assignees, its successors and assigns, to the full end of the term for which said Letters Patent will be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

JUNG-CHAK AHN

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23 August 206
DATE

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