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Our Ref.: 1035-875

PATENTS

103571738 To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof. 1. Name of conveying party(ies): 2. Name and address of receiving party(ies): 1 Shoichi ISHIHARA SHARP KABUSHIKI KAISHA Takehisa SAKURAI 6 Street Address: 22-22, Nagaike-cho, Abeno-ku Shuichi KOZAKI 7 Osaka-shi Osaka City: 8 State/Country: Japan Zip: 545-8522 Additional name/s of conveying party/ies attached? 3. Nature of conveyance: 2) Name Assignment Street Address: Merger Security Assignment ☐ Change of Name City: State: Zip: Other Execution Date: July 29, 2009 Additional name/s & address/es attached?
Yes No 4. Application number(s) or patent number(s): This assignment is being filed together with a new application. A. Patent Application No(s). B. Patent No(s). (1) 12/486,431 **(1) (2)** (2)(3)(3) Additional numbers attached Yes No 5. Name and address of party to whom correspondence 6. Total number of applications & patents involved: concerning document should be mailed: 7. Total fee (37 CFR 3.41) 40.00 H. Warren Burnam, Jr. Authorized to be charged to deposit account #14-1140 Internal Address: 8. The Commissioner is hereby authorized to charge any Street Address: Nixon & Vanderhye P.C. deficiency in the fee(s) filed, or asserted to be filed, or which 901 North Glebe Road should have been filed herewith (or with any paper thereafter 11th Floor filed in this application by this firm) to our Account No. City: Arlington State: VA 22203 14-1140. DO NOT USE THIS SPACE 9. Statements and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. H. Warren Burnam, Jr. August 20, 2009 Name of Person Signing Reg. No. 29,366 [3] Total number of pages including original cover sheet, attachments, and document: Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:

Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, VA 22313-1450
@8/21/2009 Shidhfill. 00000112 12486431

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ASSIGNMENT OF PATENT APPLICATION

(Inventors)

Shoichi ISHIHARA Takehisa SAKURAI Shuichi KOZAKI

In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to

(Assignee) (Address) SHARP KABUSHIKI KAISHA

of 22-22 Nagaike-cho Abeno-ku Osaka-shi Osaka 545-8522 Japan,

(hereinafter designated as the Assignee) the undersigned's entire right, title and interest for the United States, its territories, dependencies and possessions, and for the country of in the invention, and all application(s) for patent and any Letters Patent which may

(Other Countries) (Title)

be granted therefor, known as

LIQUID CRYSTAL PANEL AND LIQUID CRYSTAL DISPLAY DEVICE (Case No. -) for which the undersigned has (have) executed on even date herewith an application for patent in the United States of America or, if not on even date, then has executed on or has already filed in

U.S. appln. Serial No.

12/486.431

filed on June 17, 2009.

The undersigned acknowledges an obligation of assignment of this invention to said assignee at the time the invention was made.

The undersigned agree(s) to execute all papers and documents necessary in connection with the application or any interference which may be declared and any continuing or divisional applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient and further to perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the firm of NIXON & VANDERHYE P.C. the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).

PATENT REEL: 023135 FRAME: 0501 Date July 29, 2009
Signature of inventor

Shoichi Ishihara

Shoichi Ishihara

Date July 19, 2009
Signature of inventor

Takehisa SAKURAI

Date July 29, 2009
Signature of inventor

Shuichi Kozaki

Shuichi KOZAKI