(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
13 September 2007 (13.09.2007)

PCT

(10) International Publication Number
WO 2007/103213 A1

(51) International Patent Classification:
H01L 27/146 (2006.01)

(21) International Application Number:
PCT/US2007/005440

(22) International Filing Date: 2 March 2007 (02.03.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/367,581 6 March 2006 (06.03.2006) US

(71) Applicant *(for all designated States except US)*: **MICRON TECHNOLOGY INC.** [US/US]; 8000 S. Federal Way, Boise, ID 83707-0006 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **LI, Jiutao** [CN/US]; 5325 E. Branchwood Drive, Boise, ID 83716 (US).

(74) Agent: **MINUTOLI, Gianni**; Dickstein Shapiro Llp, 1825 Eye Street, NW, Washington, DC 2006-5403 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

[Continued on next page]

(54) **Title:** IMAGE SENSOR LIGHT SHIELD

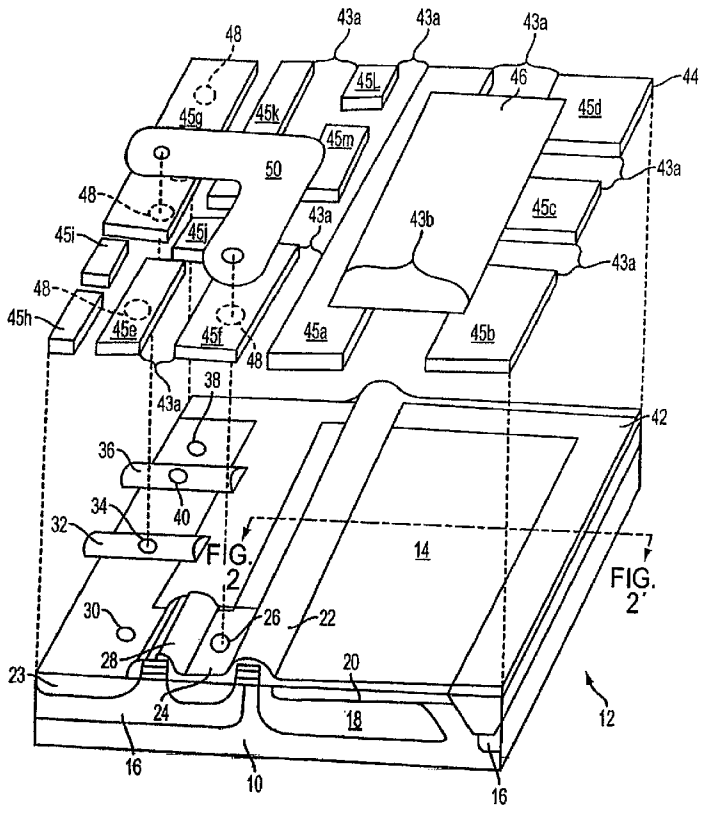


FIG. 2

FIG. 2'

(57) **Abstract:** A structure and method of reducing optical cross talk in an image sensor by using a light shield having light shield portions comprising a plurality of separated blocks of opaque material above each pixel cell's photosensor. The light shield portions have an aperture allowing light to pass through to the photosensor associated with the pixel cell. The blocks are separated from each other by a distance shorter than the wavelength of visible light; as such, the space created between the blocks mitigates the passing of wavelengths of incident light therethrough to undesired areas.

WO 2007/103213 A1

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.