MOS COLOR CAMERA CHIP AND METHODS OF MANUFACTURE AND OPERATION THEREOF

ABSTRACT OF THE DISCLOSURE

An integrated-circuit color camera chip is color sensitive by grouping closely-adjoining light-detecting cells in a photodiode array into triplets. The cells in the triplet are similar, except that each is associated with a color filter of a different color, so each cell in a triplet is red, green or blue in an R-G-B system. The proximity and small size of the cells in a triplet allows them to differentiate accurately the color components for each picture element of the detected image. This color information is adjusted on-chip for color, brightness and contrast before being sent to an external read device or display device. The color filter is a series of passive layers on the integrated circuit surface which permits the selective transmission of light or electromagnetic radiation of certain frequency ranges. The filter may be coated onto a semiconductor wafer after the latter has undergone conventional MOS process steps.

(FIGURE 1 IS SUGGESTED FOR PUBLICATION)