

ABSTRACT

An image sensing capable of improving characteristics of one or more miniaturized pixels is disclosed. The image sensing device includes: a substrate including photoelectric conversion regions, each
5 photoelectric conversion region configured to generate photocharges corresponding to an intensity of incident light, the substrate having a light receiving surface through which the incident light enters the substrate to reach the photoelectric conversion regions; and a plurality of microlenses disposed above the light receiving surface of the
10 substrate, each microlens having a top surface to receive incident light and a bottom surface that is opposite to the top surface. each of the microlenses is structured to have a focal distance greater than or equal to a limit focal distance associated with a distance between the light receiving surface of the substrate and the bottom surface of each of the
15 microlenses.

FIG. 2A