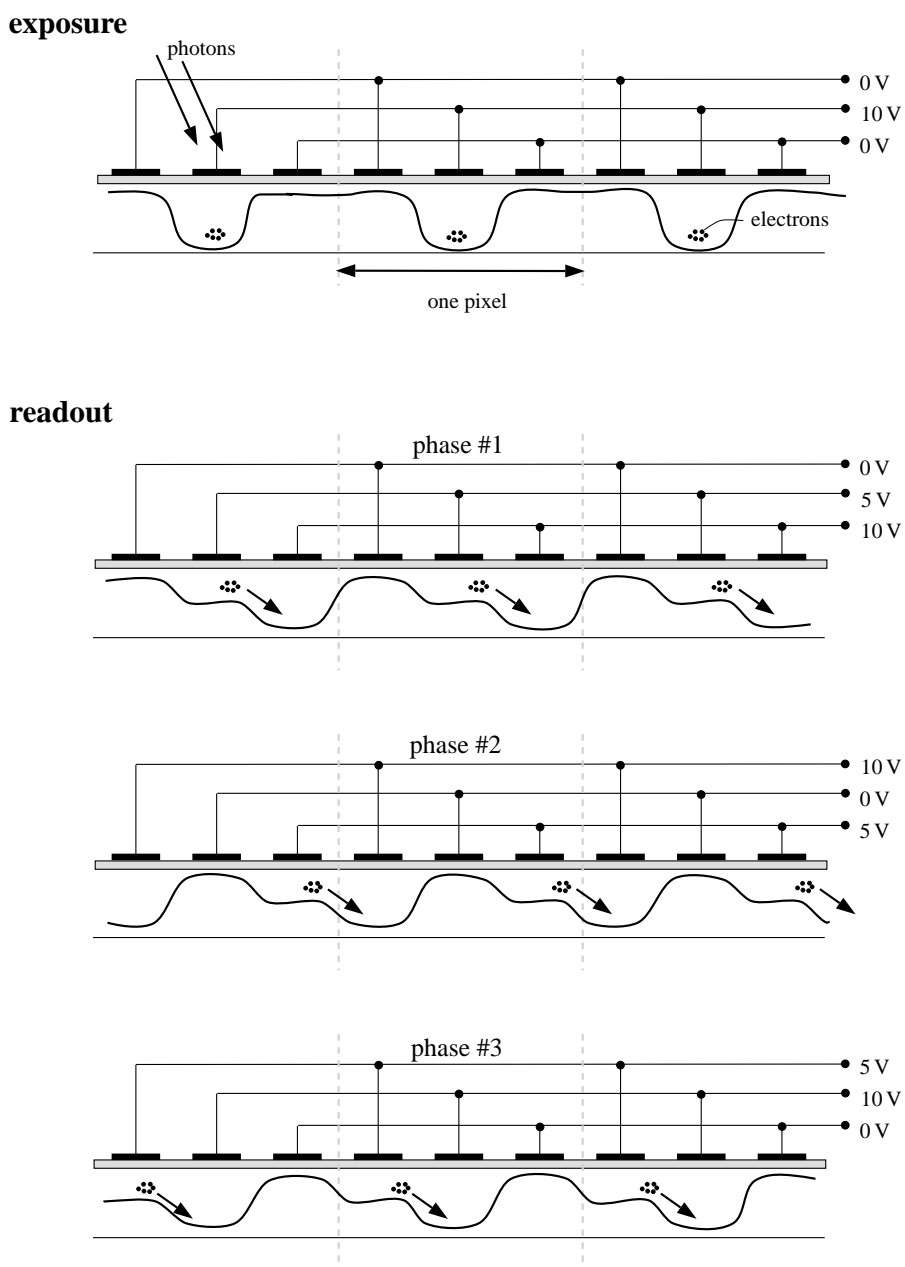


Charge Coupled Devices – exposure and readout



During the exposure phase, electrons promoted to the conduction band in the semiconductor are collected in a potential well under each pixel. The well is created by holding the central electrode in each pixel at a more positive potential than its neighbours.

During the readout procedure, the potentials of the electrodes are manipulated to flush the electron packets along the pixel row in a three-step operation. The packets are read sequentially as they emerge from the end of the row. The electrons from each pixel are kept separate so that a two dimensional image can be reconstructed.