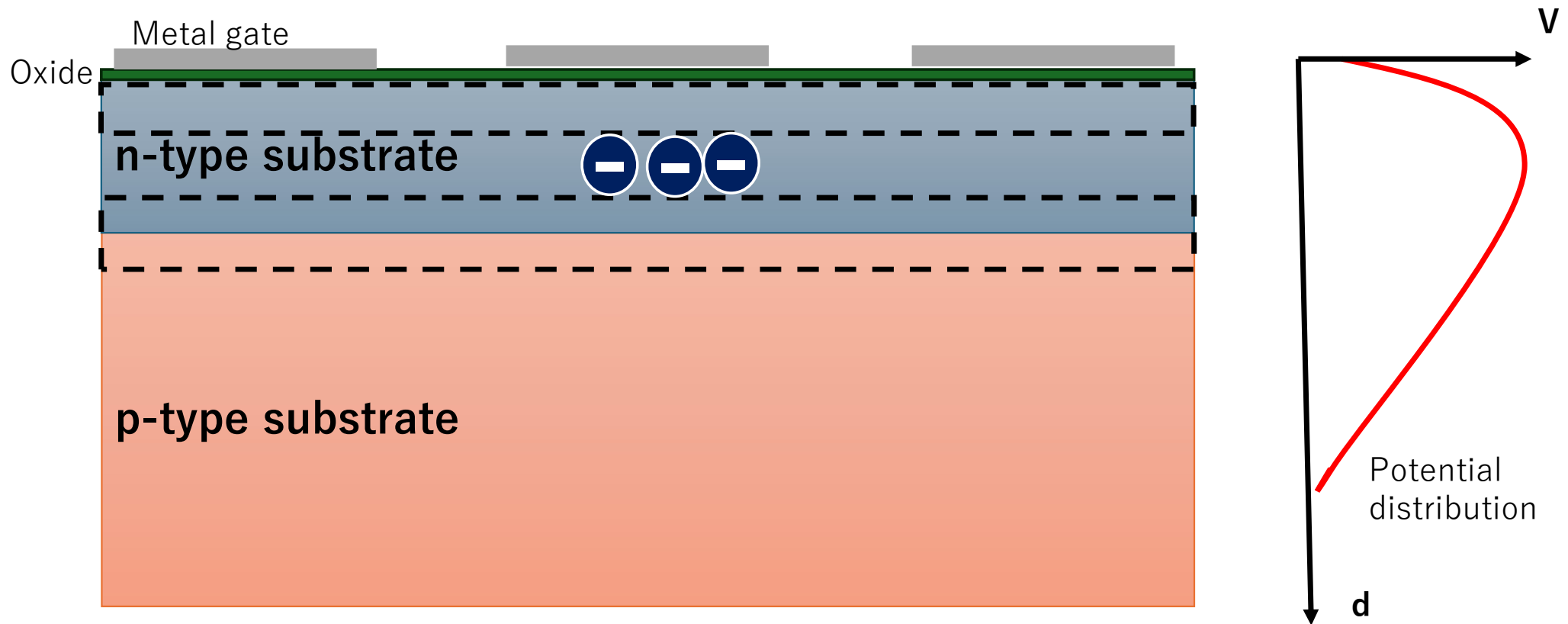


3 Draw a diagram of a “buried-channel” CCD to illustrate where charges are collected. Cite its advantages over a surface-channel CCD.

Electrons are transferred inside of the silicon

⇒ **Avoid the effect of crystal irregularities and defect the crystal lattice**

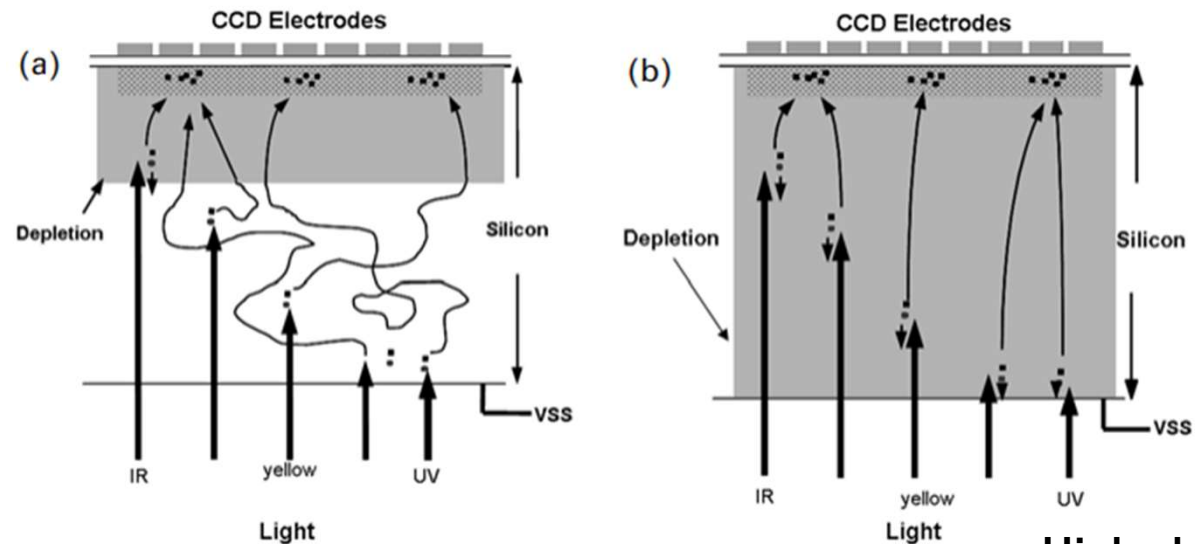
⇒ **reduce image smear**



9 What is meant by a “high-rho” CCD, and what problem does it solve?

High-rho CCD: It has a silicon layer with much lower doping concentration (=carrier), and deeper depletion region

Problem solved by high-rho CCD: fringing
(charges not generated by depletion region will move random)



High-rho CCD