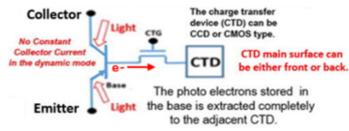
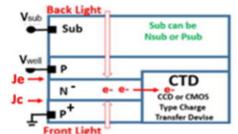
## Invention and Historical Development Efforts of Pinned Buried Photodiode.

P+NP Double Junction
Dynamic Photo Transistor type
Pinned Buried Photodiode

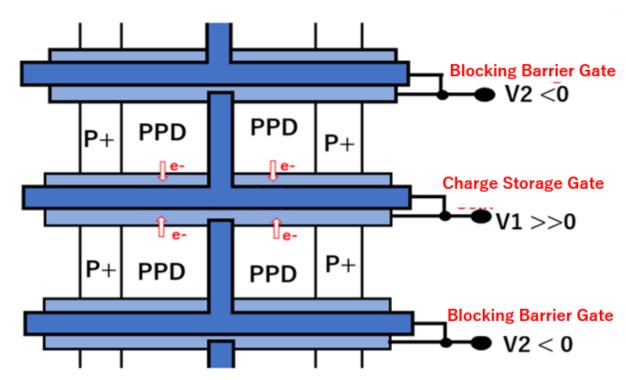




Function Capability
Complete Charge
Extraction from
the N base region

Electric Shutter

the N base region for low image lag and high speed high quality action pictures



Yoshiaki Hagiwara, Motoaki Abe and Chikara Okada,
"A 380H X 488V CCD Imager with Narrow Channel Transfer Gates",
Proceeding of the 10th Conference on Solid State Devices, Tokyo 1978,
Japanese Journal of Applied Physics, Volume 18 Sup 18-1, pp. 335-340 November 1979.

SSDM1978 Paper Vertical CCD No Image Lag **Transfer Region** Less Than 500 Å V1 Vertical CCD Transfer Region Transfer Gate Potential Well V1 Vertical CCD Storage Gate Potential Well Storage Regio