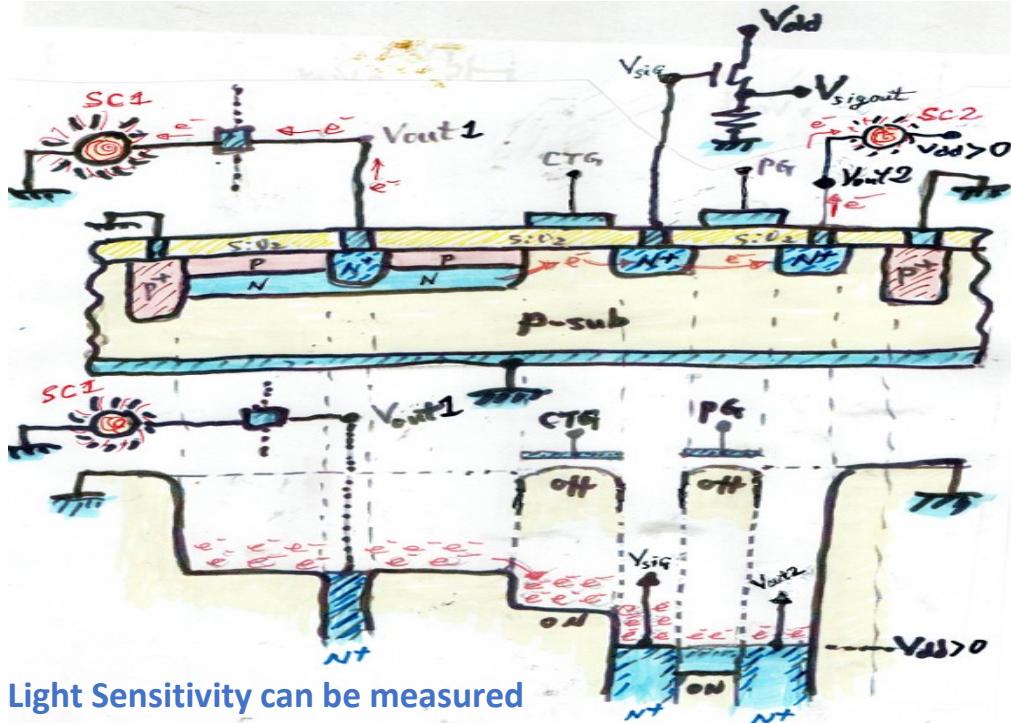


# Sony Bipolar Transistor P+PNPP+ Double Junction Type Solar Cell

[https://202011282002569657330.onamaeweb.jp/AIPS\\_Library/JP2020\\_131313\\_on\\_Doubel\\_Junction\\_Pinned\\_Phodiode\\_Solar\\_Cell.pdf](https://202011282002569657330.onamaeweb.jp/AIPS_Library/JP2020_131313_on_Doubel_Junction_Pinned_Phodiode_Solar_Cell.pdf)



Solar Cell Light Sensitivity can be measured by placing a photo current sensor at SC1 or SC2.

Proceeding of the 10<sup>th</sup> Conference on Solid State Devices, Tokyo, 1978;  
Japanese Journal of Applied Physics, Volume 18 (1979) Supplement 18-1, pp.335-340

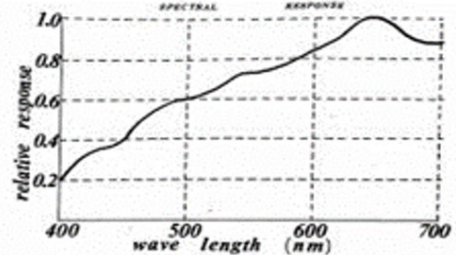
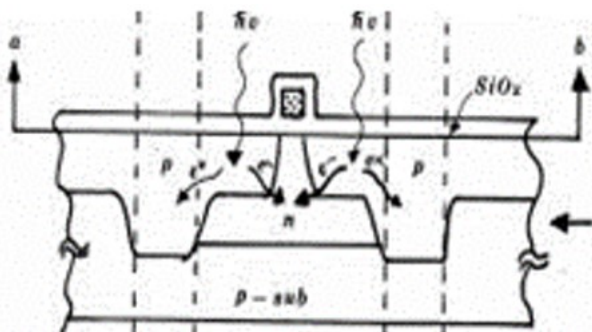


Fig. 13 Spectral Response of the Pinned Photodiode with Pinned SiO<sub>2</sub> Window and Pinned Surface.

## THE PINNED PHOTODIODE FOR AN INTERLINE-TRANSFER CCD IMAGE SENSOR

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28 — IEDM 84

CH2099-0/84/0000-0028 \$1.00 © 1984 IEDM

KODAK used LOCOS isolation which induced serious dark current and crystal defects degrading chip yield.

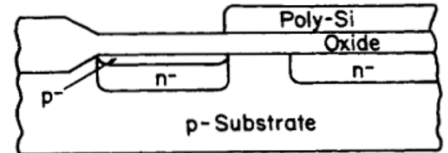


Fig. 1. Image cell schematic.

In this KODAK Pinned Photodiode IEDM1984 Paper, the Quantum Efficiency of 80% has been already achieved !

### ABSTRACT

A pinned photodiode has been developed for use in an interline-transfer CCD. This photoelement has excellent blue response and high charge capacity. Both modeling and experimental results will be presented, including process considerations necessary to avoid unwanted barriers at the diode/transfer-gate edge.

### CONCLUSION

Both the excellent blue response and high charge capacity of the pinned diode have been demonstrated. The processing of this device requires some care, however, to avoid the formation of potential barriers at the pinned diode/transfer-gate edge. This photoelement is ideal for applications requiring good blue response, large dynamic range, and no image lag. The processing considerations should also apply to the virtual-phase CCD.

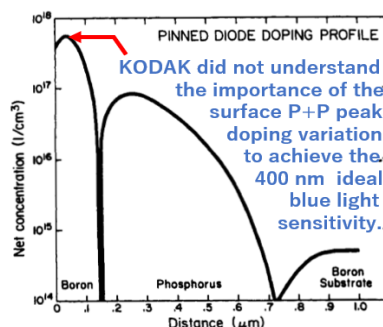


Fig. 2. Pinned diode doping profile.

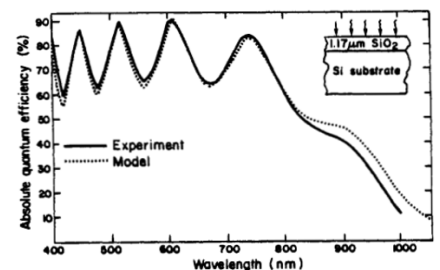


Fig. 4. Pinned diode spectral quantum efficiency. Solid and dotted curves are the experimental and theoretical curves, respectively.