



Abstract— This paper reviews the origin of Pinned Buried Photodiode and its historical development efforts. Three original Japanese Patent Applications filed by Hagiwara at Sony in 1975 are explained in details which defined the first triple junction type Pinned Buried Photodiode with the in-pixel vertical overflow drain (VOD) function with the electrical shutter capability,

Fig. 14 Analogy of rain drops and photo electrons under the sunshine.