

**ANALYSIS OF INFRARED EMISSION IN
ACCORDANCE WITH DRIVING FREQUENCY AND
DISCHARGE GAP BY USING THREE-DIMENSIONAL
PLASMA DISPLAY PANEL**

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The plasma display panels (PDPs) have been one of the most attractive products in the large size flat TV markets because of advantages such as high contrast ratio, fast response time, good natural-color reproducibility, long life time, etc.¹ Many researchers reported their experimental and numerical works to understand the physics of the discharge phenomena in a PDP cell and to improve the luminous efficiency of PDPs. In this study we have investigated three-dimensional discharge modes in accordance with driving frequency and discharge gap. For observation of three-dimensional infrared emission from PDP plasma, three-dimensional plasma display panel has been fabricated which has various discharge gap. And the spatiotemporal behavior of infrared has been experimentally investigated in sustain discharges under various driving frequency. The discharge modes which have same fd (frequency*discharge gap) parameter was similar to each other.

1. Tae-Seung Cho, Gu-Hyun Chung and Jin-Woo Jung, "Three-dimensional spatiotemporal behaviors of light emission from discharge plasma of alternating current plasma display panels", Applied Physics Letters 92, 211506(2008)