전형적인 열처리와 마이크로웨이브 열처리에 따른 PDP용 전극과 투명 유전체의 동시 소성

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Co-firing of Dielectric and Electrode with Conventional and Microwave Heating in Plasma Display Panel

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Abstract: The glass frit has been used in transparent dielectric, barrier rib and electrode of PDP (Plasma display panel). In PDP fabrication, the firing temperature of glass frit is normally 550~580°C with conventional heating. However, there are a problem that silver in electrode is diffused throughout the transparent dielectric. For inhibiting the Ag diffusion we considered use of the microwave heating. We investigated firing of glass frit compared between conventional and microwave heating. After firing by two types of heating, the diffusion of silver is determined using a optical microscope and UV-spectrometer. Based on the our results, the microwave heating should be a candidate to heating source for high efficacy in PDP.

Key Words: Microwave heating, glass frit, silver, co-firing