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## Fabrication of flexible projected-capacitive touch panel based on plastic films via lithography technique

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Recently, touch panels have been widely attracted in both consumer and commercial applications. However, classic touch panels cannot fold in different forms. Therefore, flexibility is essential for development and design of touch panels in flexible displays and smart phones in various places. Capacitive touch panels (CTPs) are divided into two categories; surface capacitive touch panel and projected capacitive touch panel (PCTP). Because of unique properties of PCTP such as high durability, multi-touch functionality, environmental resistance, a lot of flexibility in design and excellent at optical property has considerable attention in development of high performance electronic devices such as flexible displays. The present work introduced a flexible projected capacitive touch panel which was made as three layers of plastic films by polyethylene terephthalate (touch sensor)/adhesive layer/polycarbonate (cover glass). The PET (polyethylene terephthalate) and PC (polycarbonate) films equipped with ITO electrodes grid pattern on one side of each films with lithography technique. The touch position and signal to noise ratio were considered as touch panel performance. The touch position can be calculated based on the voltage that is sequentially applied to the driving electrodes (X) and the current is measured by the sensing electrodes (Y). The application of these touch panels should be in flexible mobile phones and displays and can be used in different places which are need flexible touch sensors.

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