

**[ME05]**

**Wet etching of GaAs for Lateral PIN photodiode**

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Alignment mark for the GaAs Lateral PIN photodiode is created using wet chemical etching technique. The alignment technique is vital in the fabrication of the GaAs Lateral PIN photodiode, as several processes required that the dielectric layer to be removed. The removal of this dielectric layer prevents any alignment to be made between any intermediate layers. The etchant used is a mixture of phosphoric acid ( $H_3PO_4$ ), hydrogen peroxide ( $H_2O_2$ ) and deionized water ( $H_2O$ ) in a ratio of 3-1-25. Several etch times are selected which ranges from 1, 2, 4, 7 and 10 minutes. The etch depths are measured using surface profiler tool. The results showed that the etched depth of GaAs is proportional to the etching time.