



## Four-Point Probe Electrical Measurements on p-n-p InP Structures

<http://www.firstlight.cn> 2007-09-30

The diffusion of zinc into n-type InP has been studied by four-point probe electrical measurements on homogeneously doped crystals at 750 °C. The zinc carrier concentration in the diffused layer was approximately  $3 \times 10^{18} \text{ cm}^{-3}$  and its mobility was assumed to be about  $40 \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$ . It was observed that the concentration of free carriers throughout the entire diffused region is always less than the number of introduced impurity atoms. Possible reasons are discussed to explain the observed differences. Moreover this non-correlation phenomenon

did provide substantial backing to the Hall Effect and C-V measurements that are being carried out to further analyse the Zn-InP diffused layer.

[存档文本](#)