ABSTRACT

A compound semiconductor wafer providing an InGaAs light receiving layer having superior crystal characteristic suitable for a near-infrared sensor includes an $InAs_xP_{1-x}$ graded buffer layer consisting of a plurality of layers (12a, 12b, 12c, 12d, 12e) positioned on an InP substrate and an $InAs_yP_{1-y}$ buffer layer (13) positioned on the graded buffer layer, sandwiched between said InP the (11) and the InGaAs layer, wherein maximum value of PL light emission intensity at an interface of each of the layers of the graded buffer layer and the buffer layer is, at every interface, smaller than 3/10 of the maximum PL light emission intensity of the buffer layer.