In photoluminescence of modulation doped Al$_{1-x}$Ga$_x$As/GaAs interface the broad line called H-band was observed by various authors. We investigated two p-type Al$_{0.5}$Ga$_{0.5}$As/GaAs heterostructures with two dimensional hole gas (2DHG) concentrations $p_1=7.6\times10^{11}$cm$^{-2}$ and $p_2=9.8\times10^{11}$cm$^{-2}$. The H-band emission is shifted about $\Delta E_H=3$ meV towards lower energy for the sample with higher 2DHG concentration. The line positions, for the laser power excitation $P=0.4$mW, are $E_H=1.50164$ and $E_H=1.50497$ for the samples with higher and lower 2DHG concentration, respectively. We examined the PL spectra for both samples as functions of the excitation power, which was gradually lowered from $P=2$mW to 0.8$\mu$W. We observed the considerable shift of the H-band position to lower energies as the excitation power was decreased. For the value of $P = 80$ $\mu$W a new line, which we called L1 emerges at the low-energy side of the H-band transition (about 4meV below for both samples). As the excitation power is further lowered, the intensity of this line increases. At the same time the H-band emission gradually disappears and becomes invisible at 20 $\mu$W. We exclude a bulk origin of the L1 transition for two reasons. First, its position depends on 2D holes density and is lower (for identical excitation power) in the sample P$_2$ by $\Delta E_{L1}=1.7$meV. Second, similarly as the H-band maximum, the L1 line shifts to higher energies with increasing intensity of excitation. We performed photoluminescence measurements in magnetic fields applied perpendicularly to the structure (Faraday configuration). Both lines display remarkably different behaviour: the L1 line exhibit diamagnetic shift whereas H-band components change linearly with B. These results lead us to conclusion that the L1 emission is from donors to confined holes states, whereas the H-band is connected with unequilibrium carriers created by laser excitation. We performed detailed theoretical calculation which results agree well with the experimental data.