Interaction of electrons with a lower-hybrid wave (LHW) is usually described using a quasilinear theory. It was shown formerly that in some cases the quasilinear approach is not proper. This work deals with an eect of spatial geometry of LHW spectra on a particle velocity diusion. Diusion coecient for various cases was computed and put to use to predict a long term evolution of an electron velocity distribution function. The computation was (on the contrary of previous papers) based on fully relativistic equations of motion. The results conrm that region of high electron acceleration is broadest just after the wave enters plasma and becomes narrower along its progress deeper into it. In the range of wave intensities over 105 V/m we found that the diusion becomes Lévy-walk. In the second part predictions of electron acceleration in front of LH grill of two dierent approaches were compared. We showed that the approach based on usage of Fourier expansion of potential gives only a rough estimate of the acceleration.