Drug carrier can be defined as the administration of drug from natural or synthetic origin, in order to control \textit{in vivo} availability of drug molecules for pharmacological effects. Rapid and efficient drainage and the relative impermeability of the cornea account for poor ocular bioavailability. To increase ocular bioavailability of drug, we need to increase ocular residence time of the drug. \textit{In situ} gelling systems are viscous gelling solutions that posses phase transition on the eye due to change in certain physical and chemical properties. The purpose of the present work was to develop \textit{in situ} gelling systems for fluroquinolone drugs viz. levofloxacin hemihydrate, ofloxacin (BCS Class I); and norfloxacin, equivalent to 0.5%, 0.3% and 0.3\%w/v respectively by using three different mechanisms for phase transition viz. pH, ion and temperature. \textit{In situ} gel forming abilities of the developed systems significantly controls precorneal drainage. Thus, increased residence time in eye would help to increase ocular bioavailability. Optimized thermosensitive \textit{in situ} gelling medicated formulation containing levofloxacin hemihydrate, ofloxacin and norfloxacin was found to be well tolerated and nonirritant. The optimized systems of levofloxacin hemihydrates, ofloxacin and norfloxacin are \textit{in situ} gelling and remain in the form of clear solution.