Abstract

It's well known that the quadratic residue code over finite fields is an interesting class of cyclic codes for its higher minimum distance. Let g be a positive integer and p,p_{1}, ..., p_{g} be distinct odd primes, this talk generalizes the constructions for the quadratic residue code with length p to be the length n=p_{1}\cdots p_{g}, and to be the case m-th residue codes with length p over finite fields, where m\geq 2 is a positive integer. Furthermore, a criterion for that these codes are self-orthogonal or complementary dual is obtained, and then the corresponding counting formula are given, respectively.