Steiner k-diameter of Tensor Product of Complete Graphs

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As introduced by Chartrand in 1989, for a graph $G(V, E)$, the Steiner distance $d_G(S)$ for $S \subseteq V(G)$ is defined as the minimum size among all connected subgraphs whose vertex sets contain S. Concepts based off of this include the Steiner k-eccentricity for a vertex $e_k(v)$, which is the maximum Steiner distance of all subsets of $V(G)$ of order k and containing v, and the Steiner k-diameter $\mathrm{sdiam}_k(G)$, which is the maximum Steiner k-eccentricity out of all vertices v of G, or the maximum Steiner distance out of all subsets S of $V(G)$ and of order k. We found equalities for the Steiner k-diameters of the tensor product of complete graphs.