On isocategorical compact groups

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It is well known and classical that non-isomorphic finite groups can have isomorphic representation rings or, equivalently, character tables. In the classical cases, however, such groups have inequivalent tensor categories of representations. A few years ago, Davydov, Etingof/Gelaki and Izumi/Kosaki discovered independently that there even exist non-isomorphic finite groups with representation categories that are equivalent as tensor categories. Such groups were called isocategorical. We provide a more categorical approach to the phenomenon that allows (a) extension to compact groups and (b) more complete classification results.