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Liquid Crystal Elastomer Motors[1] PETER PALFFY-MUHORAY, Liquid Crystal Institute, Kent State University, XIAOYU ZHENG, Dept. of Mathematical Sciences, Kent State University — Motors produce motion due to the transfer of energy, but not of momentum, to the device. In LCE motors, motion arises due to changes in the shapes of solid samples. Here we consider motors where the shape change is a bend, rather than an elongation or contraction. We focus on the light-driven motor of Ikeda et al.; we analyze in detail the physical mechanisms which bring about the motion, and discuss the momentum current which is generated. We present the results of numerical simulations, and compare these with experimental observations.

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